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ABSTRACT

Exercises are provided in a set of five workbooks designed to aid data processing students in building vocabulary and reading skills. Each workbook borrows from the data processing vocabulary to provide explanations and exercises for a sequential series of learning objectives. One workbook concentrates on developing the ability to determine word meanings through contextual inference. Exercises in this booklet are designed to demonstrate the variety of meanings a word can have in different contexts and to caution students about the limitations of using context clues. Another workbook provides exercises focusing on common suffixes and prefixes which can help the student recognize and define words with which he/she may not be familiar. A third workbook presents exercises which promote efficient dictionary usage, by reinforcing students' understanding of alphabetical order and of the components of a dictionary entry. The fourth workbook illustrates learning strategies that can be used in mastering technical vocabulary encountered in reading assignments, and the fifth booklet presents exercises in inference, which help students recognize antecedents of pronouns, read literally, understand what is implied by an author, and contrast what is implied with what is said. Accompanying the exercises in the workbooks are pre- and post-tests to help students assess their progress in terms of each of the instructional objectives covered. (JP)

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PERSONAL ACHIEVEMENT

READING

Data Processing

Prepared by

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Reading Specialist

1977

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PERSONAL ACHIEVEMENT

READING

Data Processing

Clues to Word Meaning

PRE/POST TEST
CLUES TO WORD MEANINGS

Obj. 1

Select the appropriate meaning for common words according to the context in which they are used. 80% = mastery

1. The doctor said the operation was a success.

   a) business system
   b) surgery
   c) running of a machine
   d) amputation

2. The smog alert lasted three days.

   a) awake
   b) a warning
   c) to warn someone
   d) small animal

3. The mechanic said the part hadn't come in yet.

   a) separate
   b) role in a play
   c) piece of equipment
   d) leave

4. The plant grew two new leaves this week.

   a) factory
   b) vegetation
   c) put in the ground
   d) salad

5. I tried to nurse the baby bird back to health.

   a) sip slowly
   b) hand bag
   c) a person in the medical field
   d) care for and heal

Obj. 2

Select the correct meaning of the underlined word by using the context clues. 80% = mastery

1. When I first went to Russia, dissident voices were silent. Today there are a few that are outspoken, and others that are not.

   a) disagreeing
   b) friendly
   c) dangerous
   d) religious

2. The inevitable trend is automation. Someday a jet liner will be built that will fly itself from take off to touch-down.

   a) slow
   b) certain
   c) scary
   d) rapid

3. Those wetlands teem with geese. In the fall, when the Canada geese leave, the whole landscape seems to take off.

a) pain up
b) are noisy
c) play games
d) are full of

4. Eventually the anti-metric feeling died away. Great Britian began conversion to the metric system in 1965.

a) change to
b) legalize
c) do away with
d) campaign for

5. The Federal Republic of Germany has emerged as Western Europe's strongest most prosperous nation. How did it happen?

a) won
b) fought
c) appeared
d) disappeared

Obj. 3

Write the correct meaning of the underlined word by using the definition clues. 80% = mastery

1. The portal, or door, swung open wide.
meaning of portal _____

2. The sedating drug began to have an effect, since the patient grew quiet and sleepy.
meaning of sedating _____

3. The schedule for the day precluded playing tennis; there just wasn't enough time.
meaning of precluded _____

4. Origami, or paper folding, is an old art.
meaning of origami _____

5. Her absence caused total chaos. Everything was in a confused mess.
meaning of chaos _____

Obj. 4 [NOT APPLICABLE TO AUTO REPAIR]

Write the correct meaning of the underlined word by using the example clues. 80% = mastery

1. Duplication machines, such as a ditto master or a thermo fax speed up office processes to a great extent.

meaning of duplicating machines _____

examples of duplicating machines _____

2. Raw crops such as corn and soybeans are a mainstay to Iowa's economy.

   meaning of raw crops _____

   examples of raw crops _____

3. Power tools like a hydralic jack or an air wrench are a necessity for a good auto mechanic today.

   meaning of power tools _____

   examples of power tools _____

4. Food additives such as cyclamates, and saccharin are prohibited by the FDA.

   meaning of food additives _____

   examples of food addictives _____

5. Emphysema and asthma are examples of respiratory ailments.

   meaning of respiratory ailments _____

   examples of respiratory ailments _____

Obj. 5 [NOT APPLICABLE TO AUTO REPAIR]

Write the correct meaning of the underlined word by using contrast clues. 80% = mastery

1. Unlike the trim lightweight Danish furniture, some of the old Victorian furniture is ponderous.
   ponderous means _____

2. While Jim is a rather lethargic individual, his brother Matt is energetic, alert, and always on the go.
   lethargic means _____

3. In contrast to some modern dissonant jazz, old time jazz was melodic and harmonious.
   dissident means _____

4. Sam wanted to consolidate the two businesses into one, whereas Joe wanted to keep them seperate.
   consolidate means _____

5. The President wanted total and immediate withdrawal of all troops. On the other hand, the Secretary favored more gradual phase out of the troops.
   phase out means _____

Obj. 6 [NOT APPLICABLE TO AUTO REPAIR OR BUSINESS]

Write the correct meaning of the underlined word by using the inference clue. 80% = mastery

1. After he was hung, his name was exonerated when his family proved he had been innocent.

   a) cleared
   b) forgotten
   c) hated
   d) revered

2. There will be sufficient food as soon as the crops are harvested.

   a) scarce
   b) too much
   c) enough
   d) an absence of

3. The pantomime artist must exaggerate every movement to make it seem larger than life.

   a) act out
   b) practice
   c) hide
   d) overdo

4. The filth and poverty in that slum was deplorable.

   a) moderate
   b) going away
   c) pitiable
   d) increasing

5. Human rights have become a major aspect of U.S. foreign policy.

   a) problem
   b) part of
   c) army
   d) love

Obj. 7 [OBJ. 4 FOR AUTO REPAIR, OBJ. 6 FOR BUSINESS]

Identify the reference pronouns and their referents in the following sentence. 80% = mastery

1. The bags contained gold jewelry, and they were missing the morning after the robbery.

   pronoun _____ referent _____

2. Many people have given all they had in the fight for freedom.

   pronoun _____ referent _____

3. If it hails now, the farmers are likely to loose most of the crops, but they can apply for crop damage insurance.

   pronoun _____ referent _____

4. The forest was turned to a charred battlefield as the fire consumed it.

pronoun _____ referent _____

5. The machine wore out because it hadn't been given the proper maintenance care.

pronoun _____ referent _____

Obj. 8

[OBJ. 7 FOR BUSINESS, OBJ. 5 FOR AUTO REPAIR]
100% correct = mastery

Write two (2) limitations of using context clues in determining word meaning.

1.

2.

ANSWER KEY
PRE/POST TEST
CLUES TO WORD MEANINGS

Obj. 1

1. B
2. B
3. C
4. B
5. D

Obj. 2

1. A
2. B
3. D
4. A
5. C

Obj. 3

1. door
2. quieting, calming
3. ruledant, eliminated
4. paper folding
5. total confusion

Obj. 4

1. machines that duplicate on copy
   - ditto master, thermofax
2. crops grown in rows
   - corn, beans
3. tools that use external energy
   - hydralic jack, power wrench
4. chemicals added to foods
   - cyclamates, saccharin
5. lung problems
   -emphysema, asthma

Obj. 5

1. huge, heavy
2. sluggish, slow
3. harsh, discordant
4. merge
5. elimination

Obj. 6

1. A
2. C
3. D
4. C
5. B

Obj. 7

1. they - bags
2. they - people
3. they - farmers
4. it - forest
5. it - machine

Obj. 8

1. The context sometimes doesn't always reveal the words meaning.

2. The context may mislead you about a words meaning.

CLUES TO WORD MEANING - DATA PROCESSING

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CLUES TO WORD MEANING

By itself, a word does not have a clear, precise meaning. Suppose someone were to ask you the meaning of "field". You might not be able to answer because "field" as presented to you does not have a clear definite meaning. But, if that person were to say "cornfield" you would immediately know he/she is talking about an area of land where corn is raised. If, on the other hand, someone says, "Wow, he can really field that ball!" you would know that in this context "field" means to catch a ball.

The sentences or words surrounding a particular word are called the context. The context can give you the meaning not only of familiar words like "field", but also of new or difficult words. The writer frequently gives the meaning of a new word in the same paragraph or near by so that you don't have to go as far away as a dictionary or even a glossary to find definitions while you are reading.

In this unit you will work on:

(1) special meanings for commonly used words and

(2) getting meanings of words from the context.

As you learn these skills, you will enlarge your vocabulary and become a better reader.

OBJECTIVE 1

You will be able to select the appropriate meaning for ten common words, according to the context in which the words are used.

STRATEGY

A word may have more than one meaning. Its meaning depends on the way it is used. Take "hit" for example. A "hit" is what a baseball player gets if his bat connects with the ball; you can "hit" someone else (provided you're bigger than they are) or you can "be a hit" (popular, well received) if you do something everyone else admires.

A "hit" can also be a popular song, a new recipe or a movie--anything very successful. A teacher may only have time to "hit" the high spots in one class period; you father may "hit" you for a $5.00 loan.

Have you ever "hit" the books, "hit" the hay or better yet, "hit" the jackpot? The definition of "hit" all depends on the context it's used in.

You have seen and used all of the following words. Each word has many meanings, some of which we don't use as often as others. See how many different ways you can use each word. For example, use the word "stick":

1. A "stick" is a piece of wood.
2. You can "stick" (poke) someone in the ribs.

3. A nickname will often "stick" with a person as he/she grows older.

4. Would you care for a "stick" of gum?

There are many more meanings for "stick". Can you add others to this list?

Now try these. See how many different ways you can use each word.

1. set
2. book
3. pot
4. spring
5. bear

Here are some that are more difficult. They are words which have a special meaning in the context of Data Processing. See if you can think of at least two different meanings for each, then check your answers to see if you have a Data Processing definition. You may use a dictionary if necessary.

1. program _____ _____
2. gap _____ _____
3. drive _____ _____
4. field _____ _____
5. character _____ _____

6.	bus	_____	_____
7.	garbage	_____	_____
8.	network	_____	_____
9.	noise	_____	_____
10.	run	_____	_____
11.	compile	_____	_____
12.	execute	_____	_____
13.	scratch	_____	_____

As you read your class textbooks, watch for familiar words used in unfamiliar ways.

When you have completed these definitions, see your instructor for a post-test covering them.

OBJECTIVE 2

You will be able to determine the meaning of at least six (6) given words by using context clues.

STRATEGY

Not only does the context decide the meanings of familiar words, but it also gives you an idea of the meanings of words you don't know or haven't seen before.

Often you can tell the meaning of a word by reading the words around it. When you come to a new word read to the end of the sentence (or paragraph) to see if you can figure out the meaning.

EXAMPLE #1: glumpf (This is a made-up word. See if you can figure out its meaning.)

a. Fred is very good in glumpf.

(We don't know the meaning of this sentence because we don't know the last word. Go on to the next sentence.)

b. He was in glumpf league last summer.

(There are two clues given in this sentence. What are they?)

1) _____ 2) _____

c. He can throw a glumpf so slow that you can count the stitches.

(Glumpf hasn't changed; we've only surround it with different words.)

d. Last year he visited the Glumpf Hall of Fame in Cooperstown, New York.

(What is the new clue given here? _____)

e. From the clues given in the above sentences we know that glumpf means _____. (Fill in the blank.)

REMEMBER: Think about all the words you know to see if you can figure out the words you don't know.

Now see if you can figure out the meaning of the underlined words in these sentences by using the context. The questions in parentheses will help you think through the process.

a. The deep-sea diver used a special searchlight to help him see in the murky waters.

(What would a deep-sea diver use a searchlight for?)

b. The balloon ascended to a height of six hundred feet.

(What would a balloon have to do to reach 600 feet?)

c. The fire was extinguished with a special kind of liquid foam?

(What might liquid foam do to a fire?)

murky means _____

ascended means _____

extinguished means _____

The examples above have the most obvious type of contextual clue--there can be no doubt about the meanings of the words. You only had to use common sense or recall an experience you have had or read about to decide the meanings. We know from experience how people and things act in a given situation. Consequently we can come close to figuring out the meaning of the word by looking at the situation (the whole sentence) and recalling what a logical outcome would be.

Here is another example of a common sense context clue. Can you tell what retrieve means in the sentence below?

The computer is of the utmost importance in today's society because it can store and retrieve information quickly and in large quantities.

(What is a computer used for? For holding and giving out information quickly and efficiently. Therefore, retrieve means to get and give out.)

Here are some "common sense" and "common experience" contexts. Each sentence contains a clue or clues to the meaning of the underlined word. Decide the meaning by using common sense or recalling some experience you know about, as in the examples above. Then choose the best meaning for the word according to the context.

____ a. The basketball game was a fiasco, with our team scoring 21 points to their 104.

(1) success
(2) disaster
(3) challenge

____ b. The night time operator relieved the daytime operator at 7:00, the start of his shift.

(1) took over for
(2) paid
(3) helped to his feet

____ c. During those first confusing days, the thoughts of a new student at Kirkwood drift back to high school or home where she was "in", knew everyone and felt comfortable. A feeling of nostalgia sweeps over her.

(1) delight
(2) sadness
(3) homesickness

(Although (2) is a possible answer, (3) is the best answer because it is more specific in terms of the sentences given here. As you can see, the context clue is sometimes in front of the word.)

Use the context to determine the meanings of the following underlined words:

a. We had no use for our flashlights; the moon illuminated our path very clearly.

illuminated means _____

b. I cannot tell you a secret unless you promise not to divulge it.

divulge means _____

c. President Franklin D. Roosevelt died in 1945, and his wife in 1962; she survived him by seventeen years.

survived means _____

d. Farmers will be in trouble unless the drought ends soon; it hasn't rained in six weeks.

drought means _____

e. The speaker should have used a microphone. His voice was inaudible, except to those near the platform.

inaudible means _____

f. At one point during the hurricane, the winds reached a velocity of 130 miles an hour.

velocity means _____

g. The hot rod race ended in a tie when Paul in "Blue Lightening" and Andy in the "Yellow Streak" crossed the finish line simultaneously.

simultaneously means _____

Check your answers with the answer key. If you got 6 or more correct, go on to the next objective. If you missed more than one, see your instructor before you go on.

OBJECTIVE 3

You will be able to determine the meaning of ten (10) given words by using definition clues.

STRATEGY

Sometimes authors realize they have used words you, the reader, may not know. In that case they may give an outright definition or explanation of its meanings to help you. In other words, a definition of a difficult word may be clearly stated in the same sentence or at least the same paragraph.

EXAMPLE #1: "By automatic we mean that, once it receives instructions, it performs without human intervention.

a. The definition (underlined twice) of automatic is clearly performs without human intervention. Here the clue (the definition) is close to the word and is "signalled" by a comma before the definition. (Sometimes the word "or" is used as well as the comma.)

b. A definition or explanation clue is also often indicated by a form of the verb "to be" as in these examples (the clues are underlined twice):

EXAMPLE #2: The development of the laser--that is, a device which concentrates high energies from radiation into a narrow, sharply focused beam of light--has practical applications in data transmission.

EXAMPLE #3: Indian paint brush is a type of showy herb that grows in the southwestern United States.

c. Sometimes a definition clue appears in the form of description. Again, a form of the verb "to be" is usually used.

> CAUTION: Be sure the description is a fairly precise one before you rely on it for a definition. This sentence, "A gazelle has four thin legs and is very nimble-footed," is too general and vague to be a definition.
>
> However, the following example is a more precise description, and therefore a good definition.
>
> EXAMPLE:
>
> The griffin was a mythological monster with an eagle's wings, head, beak and a lion's body, legs and tail.

In the following sentences use the definition clue to decide the meaning of the underlined words. Then, write those meanings on the blank lines.

1. "Each individual record, or logical record, is in block."

_____

2. "We must all soon learn how to compute in the metric system which is a decimal system of weights and measures universally used in science."

_____

3. "In all these examples, you are observing how plants and animals do their work or, in other words, their behavior."

_____

4. "The tape drive reads each time the data between two gaps or one physical record."

_____

5. "All the army's computer hardware, the computer and all of its mechanical, electrical, magnetic, and electronic parts, were lost for three months in a warehouse on Guam."

_____

6. "The second level of language that uses symbols rather than binary numbers, symbolic language, is translated into machine language by the assembler."

_____

7. "Data is the material the computer reads, writes, and stores."

_____

8. "An abacus, an ancient device used for mathematical calculations, was constructed of beads strung on wire."

_____

9. "Yet science has solved many difficult problems and this is surely a problem of great interest to all of us. As good a way as any to start on the puzzle is to make a sort of guess, a hypothesis, as to how the sun's family might have begun and to see how it works."

---

10. "As you have seen, living things must produce offspring to continue to live. Another name for producing offspring is propagation."

How did you do? If you missed more than one, check with your instructor. Otherwise, go on to the next objective.

OBJECTIVE 4

You will be able to determine the meaning of nine (9) out of ten (10) given words by using example clues.

STRATEGY

Examples are frequently used to provide a meaning within a context. Words which sometimes indicate this clue are:

like	such as	for example
especially	this	these
other	in that way	

EXAMPLE #1: The ENIAC is an example of a first generation computer.

EXAMPLE #2: Substances like hydrogen and oxygen that cannot be changed into component substances are called elements.

In Example #2 the meaning of "element" is made clear by two clues, an example clue ("like hydrogen and oxygen") and a definition clue ("substances that cannot be changed into component substances"). This combination is common in textbooks especially, since the writers are eager to emphasize and make certain ideas very clear and precise. In fact, many of the examples for this practise as well as others in this unit were taken from Business Data Processing required reading for many data processing students.

In the following practices, identify the example context clue. Then write your definition of the underlined word (determined by using the clues).

1. Data are recorded on the outside of the surface of magnetic drums, hollow cylinders revolving at a constant speed.
   meaning of magnetic drums _____

2. The printer, a code-sensitive output device, prints the data that it receives on a paper form.
   meaning of printer _____

3. Multiprogramming is an example of a system of computer use that increases the efficiency of a computer.
   meaning of multiprogramming _____

4. In special situations, desirable features of analog and digital machines have been combined to create a hybrid computer.
   meaning of hybrid _____

5. We have today many means of communication, especially language, that enable us to reach out to the whole world past and present for ideas worth learning.
   meaning of means of communication _____

6. The boys were lying still, heads down, inert, like dead men except for their loud and broken gasps for air.
   meaning of inert _____

7. A data processing system is a series of defined operations involving some type of electronic calculating equipment.

   meaning of data processing system _____

   _____

8. A synchronous and synchronous transmissions are examples of serial transmission techniques used in telecommunications.

   meaning of a synchronous and synchronous transmissions _

   _____

9. During the 1960's a number of small and cheap computers called minicomputers were introduced into the computer market.

   meaning of minicomputer _____

   meaning of the prefix mini- _____

10. I took an axe and smashed a few of the wooden rungs, much like heavy broomsticks, that are used to bar the boxes in which the gorillas are caged.

    meaning of rungs _____

Did you get at least nine of the sentences completely correct? Good! Go on to the next objective.

If you made more than one mistake, see your instructor for further explanation.

OBJECTIVE 5

You will be able to determine the meaning of nine (9) out of ten (10) given words by using "contrast clues."

STRATEGY

A clue to the meaning of a word can sometimes be found in an opposite word (antonym) or a contrasting idea. In using contrast clues to get an idea of the meaning of a word, you may have to search several sentences in front of and/or behind the word.

EXAMPLE #1: Although Mr. Manson guzzled liquor in great quantities every evening, his sobriety was without question during the business day.

Clue: How does drinking great quantities of liquor usually affect a person? That person becomes drunk. What word indicates that Mr. Manson was not affected in the normal way?

_____

Meaning: The context clue here is although, which shows contrast. From this clue we know that sobriety means "sober" or "not drunk".

EXAMPLE #2: The flaccid condition of his body was unlike that of Jim, who now exercises daily, watches his diet and has become thin and wiry.

Clue: unlike Jim's good physical condition

Meaning: out of shape

EXAMPLE #3: Sue is an experienced programmer, but John is still a <u>novice</u>.

Clue: situation - experienced (knowing how)

Meaning: not knowing how, inexperienced

Each of the following passages contains a "contrast clue". Below each passage write the following:

1) the clue that led you to the meaning of the underlined word, and

2) the meaning itself

HINT: The following words are usually clues to contrasting or opposite ideas:		
but	meanwhile	although
yet	not withstanding	however
on the contrary	or	on the other hand
nevertheless	otherwise	whereas

1. The programmer tried reading the boss's note but found it <u>illegible</u>. However, the analyst's was easy to read.

meaning of illegible _____

clue _____

2. Although the analyst is usually late in arriving at the office, he is <u>punctual</u> with his program deadlines.

meaning of punctual _____

clue _____

3. Luckily, the power failure was temporary; in a matter of moments the computers were back up.

   meaning of temporary _____

   clue _____

4. "Bye-bye" may be a suitable ending for a telephone conversation with a friend; nevertheless, it is completely inappropriate for an office.

   meaning of inappropriate _____

   clue _____

5. Most companies do their payrolls electronically, but ABC Company processes it's payroll manually.

   meaning of manually _____

   clue _____

6. She expected the cough medicine to help her cough; however, on the contrary, it seemed to aggravate it.

   meaning of aggravate _____

   clue _____

7. When the data processing students were instructed to run a sample program they thought it was unwise of the instructor to make them do it; later, however, they saw it as a very astute move.

   meaning of astute _____

   clue _____

8. The computer can be programmed to pick names randomly out of a list, or it can be programmed to pick names in some sort of pattern.

   meaning of randomly _____

   clue _____

9. "Archeological records reveal that primitive peoples use their fingers and piles of sticks to do their counting. Since human society was still at a rudimentary stage, these crude methods were sufficient for their needs."

   meaning of rudimentary _____

   clue _____

10. "Your account of the accident concurs with John's, but differs from the accounts given by others."

    meaning of concurs _____

    clue _____

Again, check your answers with the answer key. If you missed more than one meaning and/or clue, see your instructor. Otherwise, go on to the next objective.

OBJECTIVE 6

You will be able to determine the meaning of seven (7) out of eight (8) given words by using inference clues.

STRATEGY

This kind of context clue is a little more difficult to identify, but is frequently used. You need to learn to "read between the lines" and gather details to figure out the meaning. You will also need to search the context both in front of and behind the unfamiliar word. This type of clue is actually a combination of several types of clues, but there are no specific "give away" words for it.

EXAMPLE #1: Sharon told her roommate, "I'm through with blind dates forever. This one topped all! What a dull evening! I was bored every minute. The conversation was absolutely vapid!"

Clue: dull evening, bored every minute, through with blind dates

Meaning: a bore, dull, a "zero"

EXAMPLE #2: One of the most essential people in the entire computer operation is the repairperson. Since computer time is expensive, no company wants its computer to be down for very long. Thus, it is necessary to have a repairperson available continually to keep the machine up - in working order.

If you pay close attention to the sentences in Example #2, you will be able to infer that the third sentence tells why

it's necessary to have a repairperson on hand--to repair broken computers. You should be able to figure out that down, in computer terms, means not working. Even if you can't get the full meaning, you have enough meaning to go on reading.

Each of the following passages has an inference clue which will give you an idea of the meaning of the underlined word. Read each sentence carefully, then choose or write that meaning in the space below.

1. The odd combination of a breeze and a bright light can also cause sneezing. A skeptical veterinarian once set out to disprove this.

   The word closest in meaning to skeptical is:

   a. renowned
   b. typical
   c. doubting
   d. believing

2. In fact, the distinction between the small stand-alone computers in a computing network and intelligent terminals is becoming blurred. For example, some intelligent terminals can be programmed to perform error detections and data editing functions.

   meaning of intelligent terminal _____

3. The biotic community includes the plant and animal life within an area.

   meaning of biotic _____

4. To abate the pain, the doctor gave the patient a shot of novocain.

   meaning of abate _____

5. "Happy Days" on Channel 9 Tuesday nights, is not a true story; the incidents and characters are entirely fictitious.

   meaning of fictitious _____ .

6. The behaviorist movement gaining force in the twenties turned many persons towards the belief that virtually all human traits were "conditioned" and made suspect any evidence of basic or inborn differences.

   (The clue here is an opposite.)

   meaning of conditioned _____

7. And his consecutive games record went on and on. Sick or well, he never missed a game.

   meaning of consecutive games record _____

   _____

8. "Dialogue gives sparkle and life, but it can easily be overdone. Do not employ it for trivialities; do not let it become mere patter. Use it for important and critical encounters."

   meaning of trivialities _____

See your instructor upon completion of this section. He or she will check your answers on this part as answers may vary.

OBJECTIVE 7

(1) You will be able to identify reference (pronoun) clues and (2) you will be able to identify the correct referent of given pronouns in nine (9) out of ten (10) sentences.

STRATEGY

Another important context clue is the use of pronouns. Pronouns are words which replace nouns (persons or things). The noun is sometimes called the referent, the word to which the pronoun refers. Very often the referent is in a sentence before. Again, you will need to search the context. (For more explanation of referents, see IRS Booklet A-13.)

Identify what "they" refers to in each of the following sentences:

1. Many more people now live near the Delaware River. They have built many cities and factories.

   "they" refers to _____

2. The sewage and the chemicals have changed the water. They have polluted it.

   "they" refers to _____

3. Fish cannot live in the polluted water. They have all died.

   "they" refers to _____

Be careful to specify the correct referent when you are deciding which noun the pronoun is replacing. The word "they" in sentences 2 and 3 which follow refers to something in sentence 1.

1. All atoms of gold are alike.

2. They have the same kind of nucleus.

3. They have the same number of electrons.

To what does "they" refer?

a. all atoms
b. all atoms of gold
c. gold

Remember, pronouns are words that refer to or replace nouns. They are often used to avoid repetition.

In sentence 2 below, "it" is a pronoun. What noun in sentence 1 is the referent for "it"?

_____

1. A system of pulleys can raise the car's engine from its mounting by exerting a force which is smaller than the weight of the engine.

2. It exerts a smaller amount of force over a large distance.

"It" refers to:

a. the weight of the engine
b. the car's mounting
c. a system of pulleys

Write the correct referent (noun) that the underlined pronoun stands for in each of the following passages:

1. Both hail and sleet are solid, frozen forms of precipitation. The former is produced when raindrops freeze as they pass through sub-freezing air layers on their way to earth. The latter is formed when snow-flakes melt into rain and then refreeze into sleet.

   To what does "the former" refer? _____

   To what does "the latter" refer? _____

2. Machines that are used in connection with the computer are called peripheral devices. Those that are directly connected to the computer are on-line devices.

   "Those" refers to:

   a. connections
   b. devices
   c. machines
   d. computers

3. The control unit directs the step-by-step operation of the system. It selects instructions and data from main storage, interprets them, and controls the flow between main storage and the arithmetic unit.

   "It" refers to:

   a. operation
   b. control unit
   c. main storage

   "them" refers to _____

4. Frequently, each person who uses the computer will have access to it by means of some input device such as a teletype machine.

   "it" refers to _____

5. The computer is given the program through an input device and places it in main storage (memory).

   "it" refers to _____

Check your answers with the answer key. If you missed more than one see your instructor. Otherwise, go on to Objective 8.

OBJECTIVE 8

You will be able to name two limitations of using context clues in determining word meaning.

STRATEGY

You have learned that the context often gives hints of the meaning of words. However, it is also important to realize that:

1) the context sometimes has nothing at all to reveal about a word's meaning, and

2) the context may mislead you about the word's meaning.

What does the context of the following sentences lead you to conclude about the underlined words? Is your conclusion correct in each case? (Check with a dictionary after you have made a guess.)

1. "Corbett had lived in this noisome slum for only two weeks, but he would never forget the screaming voices, the angry quarreling, and the fighting that made slum life so unbearable."

   Your intelligent guess at the meaning of noisome:

   _____

2. "He was livid with rage."

   Your intelligent guess at the meaning of livid:

   _____

In these examples the context is a real fooler!

In sentence 1, both the context of the word noisome and also its structure suggest the meaning noisy. Upon using a dictionary, however, you will find the meanings offensive, distasteful, disgusting, ill-smelling. The word noisome comes from the same root word as annoy and is in no way related to noise.

In sentence 2, did you think livid meant red or flushed? It is a logical "guess" since you have probably seen people turn red with anger. However, the dictionary gives the meanings lead color, ashen, pallid and ghastly.

What help can you get from the context in these sentences?

> "The women had an in-depth discussion of philately that lasted well into the night. Their interest in the subject was so keen that they were unaware of the passage of time."

This is an example of a context which provides no clues to the meaning of the word. You must either already know the meaning of philately and then make sense of it in the context, or you must turn to an outside source--a teacher, a knowledgeable friend, or a dictionary.

Without looking back, name two limitations of using context clues:

1) _____

2) _____

Check your answers with the "Strategy" under Objective 8. If you missed either one, reread the examples under Objective 8 and see your instructor for further explanation if you have questions.

As one teacher has wisely stated,

"Context is a magnificent help---BUT BEWARE!"

Here is a chart of guidelines for using context clues. You will probably arrive at some of your own as you read and use this technique.

DO'S AND DON'TS FOR USING CONTEXT
Do rely on context clues: 1. When you have a definite "unmissable clue"--a definition or direct explanation in the same paragraph. 2. When you have "highly reliable clues"--key words as explained in Objectives 2-6. 3. When you only need a general idea of what the word means.
Don't rely on context clues: 1. When you need an exact, definite meaning. (Context clues only give a general idea of the meaning of the word.) 2. When you don't know the meanings of the words nearby. 3. For technical words--key vocabulary which you are expected to know in your program or occupation. 4. When the word is a very important one--a key to the meaning of the whole sentence or paragraph. 5. When you have come across the word many times; if it is common in the materials you're reading, you'll want to learn its meaning completely for future reading.

REFERENCES USED FOR THIS UNIT:

Gallo, Donald, The Teaching of Vocabulary, University of Colorado, Denver Center.

Karlin, Robert, Teaching Reading in High School, Bobbs-Merrill Company, Inc., 1964.

Levine, Harold, Vocabulary for the High School Student, AMSCO School Publications, Inc., 1967.

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Thomas, Ellen Lamar and H. Alan Robinson, Improving Reading in Every Class, Allyn and Bacon, Inc., Boston, 1972.

Obj. 1
stick - adhere
1. set - to place, a group, gel, a group of tennis games
2. book - a volume to read, make reservations, 20 matches in a container
3. pot - container to cook food, container for plants, slang for marijuana
4. spring - a season, a metal coil, a source of water
5. bear - an animal, put up with
1. program - T.V. presentation / complete plan for solution of a problem, machine instructions.
2. gap - space / space or time used to indicate the end of a word, record, or file on tape.
3. drive - operate a vehicle / device that transmits magnetic impulses on tape to the computer.
4. field - pasture / assigned area in a record to be marked with information.
5. character - personality / written symbol that stands for a sound.
6. bus - masstransit vehicle / circuit over which data or power is transmitted.
7. garbage - refuse / erroneous input data.
8. network - system / a circuit which represents physical variables.
9. noise - sound / meaningless extra bits or words to be ignored.
10. run - move quickly / performance of one program on a computer
11. compile - collect / to produce a machine language
12. execute - kill / to interpret and perform routine, a machine instruction.
13. scratch - itch / abort a program, not use it.

Obj. 2
1. league, summer
2. Hall of Fame in Cooperstown
3. baseball
4. dark
5. rose
6. put out
7. -2
8. 1
9. 3

a. lighted
b. reveal
c. lived longer than
d. dry weather
e. not hearable
f. speed
g. at the same time

Obj. 3
1. individual record
2. decimal system of weights and measures
3. do their work
4. data between two gaps
5. mechanical, electric, magnetic, electronic parts
6. language that uses symbols
7. material read, written and stored by computer
8. ancient math device
9. a guess
10. producing offspring

Obj. 4
1. , / hollow cylinders
2. , / code sensitive output device
3. is an example / system at computer
4. to create / combined features
5. ,, / ways to exchange ideas
6. ,, / like dead
7. is / defined operations
8. are examples / serial transmission techniques
9. called / small cheap computers
10. like / heavy wooden sticks

Obj. 5
1. not readable / but
2. on time / although
3. not permanent / luckily
4. not suitable / nevertheless
5. by hand / but
6. make worse / however
7. wise / however
8. without pattern / or
9. beginning / primative
10. agrees with / but

Obj. 6
1. C
2. terminal which communicates
3. living
4. lesson
5. made up
6. learned
7. record of games played in a row
8. unimportant things

Obj. 7
1. people
2. sewage and chemicals
3. fish
b
c
1. hail, sleet
2. C
3. b, instructions & data
4. computer
5. program

Obj. 8
1. context may not reveal a word's meaning
2. context may mislead you about a word's meaning

PERSONAL ACHIEVEMENT

READING

Data Processing

Learning Word Parts

CLUES TO WORD MEANING - DATA PROCESSING

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Self Post-Test 27

CLUES TO WORD MEANING

By itself, a word does not have a clear, precise meaning. Suppose someone were to ask you the meaning of "field". You might not be able to answer because "field" as presented to you does not have a clear definite meaning. But, if that person were to say "cornfield" you would immediately know he/she is talking about an area of land where corn is raised. If, on the other hand, someone says, "Wow, he can really field that ball!" you would know that in this context "field" means to catch a ball.

The sentences or words surrounding a particular word are called the context. The context can give you the meaning not only of familiar words like "field", but also of new or difficult words. The writer frequently gives the meaning of a new word in the same paragraph or near by so that you don't have to go as far away as a dictionary or even a glossary to find definitions while you are reading.

In this unit you will work on:

(1) special meanings for commonly used words and

(2) getting meanings of words from the context.

As you learn these skills, you will enlarge your vocabulary and become a better reader.

OBJECTIVE 1

You will be able to select the appropriate meaning for ten common words, according to the context in which the words are used.

STRATEGY

A word may have more than one meaning. Its meaning depends on the way it is used. Take "hit" for example. A "hit" is what a baseball player gets if his bat connects with the ball; you can "hit" someone else (provided you're bigger than they are) or you can "be a hit" (popular, well received) if you do something everyone else admires.

A "hit" can also be a popular song, a new recipe or a movie--anything very successful. A teacher may only have time to "hit" the high spots in one class period; you father may "hit" you for a $5.00 loan.

Have you ever "hit" the books, "hit" the hay or better yet, "hit" the jackpot? The definition of "hit" all depends on the context it's used in.

You have seen and used all of the following words. Each word has many meanings, some of which we don't use as often as others. See how many different ways you can use each word. For example, use the word "stick":

1. A "stick" is a piece of wood.
2. You can "stick" (poke) someone in the ribs.

3. A nickname will often "stick" with a person as he/she grows older.

4. Would you care for a "stick" of gum?

There are many more meanings for "stick". Can you add others to this list?

Now try these. See how many different ways you can use each word.

1. set
2. book
3. pot
4. spring
5. bear

Here are some that are more difficult. They are words which have a special meaning in the context of Data Processing. See if you can think of at least two different meanings for each, then check your answers to see if you have a Data Processing definition. You may use a dictionary if necessary.

1. program	_____	_____
2. gap	_____	_____
3. drive	_____	_____
4. field	_____	_____
5. character	_____	_____

6.	bus	_____	_____
7.	garbage	_____	_____
8.	network	_____	_____
9.	noise	_____	_____
10.	run	_____	_____
11.	compile	_____	_____
12.	execute	_____	_____
13.	scratch	_____	_____

As you read your class textbooks, watch for familiar words used in unfamiliar ways.

When you have completed these definitions, see your instructor for a post-test covering them.

OBJECTIVE 2

You will be able to determine the meaning of at least six (6) given words by using context clues.

STRATEGY

Not only does the context decide the meanings of familiar words, but it also gives you an idea of the meanings of words you don't know or haven't seen before.

Often you can tell the meaning of a word by reading the words around it. When you come to a new word read to the end of the sentence (or paragraph) to see if you can figure out the meaning.

EXAMPLE #1: glumpf (This is a made-up word. See if you can figure out its meaning.)

a. Fred is very good in glumpf.

(We don't know the meaning of this sentence because we don't know the last word. Go on to the next sentence.)

b. He was in glumpf league last summer.

(There are two clues given in this sentence. What are they?)

1) _____ 2) _____

c. He can throw a glumpf so slow that you can count the stitches.

(Glumpf hasn't changed; we've only surround it with different words.)

d. Last year he visited the Glumpf Hall of Fame in Cooperstown, New York.

(What is the new clue given here? _____)

e. From the clues given in the above sentences we know that glumpf means _____. (Fill in the blank.)

REMEMBER: Think about all the words you know to see if you can figure out the words you don't know.

Now see if you can figure out the meaning of the underlined words in these sentences by using the context. The questions in parentheses will help you think through the process.

a. The deep-sea diver used a special searchlight to help him see in the murky waters.

(What would a deep-sea diver use a searchlight for?)

b. The balloon ascended to a height of six hundred feet.

(What would a balloon have to do to reach 600 feet?)

c. The fire was extinguished with a special kind of liquid foam?

(What might liquid foam do to a fire?)

murky means _____

ascended means _____

extinguished means _____

The examples above have the most obvious type of contextual clue--there can be no doubt about the meanings of the words. You only had to use common sense or recall an experience you have had or read about to decide the meanings. We know from experience how people and things act in a given situation. Consequently we can come close to figuring out the meaning of the word by looking at the situation (the whole sentence) and recalling what a logical outcome would be.

Here is another example of a common sense context clue. Can you tell what retrieve means in the sentence below?

The computer is of the utmost importance in today's society because it can store and retrieve information quickly and in large quantities.

(What is a computer used for? For holding and giving out information quickly and efficiently. Therefore, retrieve means to get and give out.)

Here are some "common sense" and "common experience" contexts. Each sentence contains a clue or clues to the meaning of the underlined word. Decide the meaning by using common sense or recalling some experience you know about, as in the examples above. Then choose the best meaning for the word according to the context.

____ a. The basketball game was a fiasco, with our team scoring 21 points to their 104.

(1) success
(2) disaster
(3) challenge

____ b. The night time operator relieved the daytime operator at 7:00, the start of his shift.

(1) took over for
(2) paid
(3) helped to his feet

____ c. During those first confusing days, the thoughts of a new student at Kirkwood drift back to high school or home where she was "in", knew everyone and felt comfortable. A feeling of nostalgia sweeps over her.

(1) delight
(2) sadness
(3) homesickness

(Although (2) is a possible answer, (3) is the best answer because it is more specific in terms of the sentences given here. As you can see, the context clue is sometimes in front of the word.)

Use the context to determine the meanings of the following underlined words:

a. We had no use for our flashlights; the moon illuminated our path very clearly.

illuminated means _____

b. I cannot tell you a secret unless you promise not to divulge it.

divulge means _____

c. President Franklin D. Roosevelt died in 1945, and his wife in 1962; she survived him by seventeen years.

survived means _____

d. Farmers will be in trouble unless the drought ends soon; it hasn't rained in six weeks.

drought means _____

e. The speaker should have used a microphone. His voice was inaudible, except to those near the platform.

inaudible means _____

f. At one point during the hurricane, the winds reached a velocity of 130 miles an hour.

velocity means _____

g. The hot rod race ended in a tie when Paul in "Blue Lightening" and Andy in the "Yellow Streak" crossed the finish line simultaneously.

simultaneously means _____

Check your answers with the answer key. If you got 6 or more correct, go on to the next objective. If you missed more than one, see your instructor before you go on.

OBJECTIVE 3

You will be able to determine the meaning of ten (10) given words by using definition clues.

STRATEGY

Sometimes authors realize they have used words you, the reader, may not know. In that case they may give an outright definition or explanation of its meanings to help you. In other words, a definition of a difficult word may be clearly stated in the same sentence or at least the same paragraph.

EXAMPLE #1: "By automatic we mean that, once it receives instructions, it performs without human intervention.

a. The definition (underlined twice) of automatic is clearly performs without human intervention. Here the clue (the definition) is close to the word and is "signalled" by a comma before the definition. (Sometimes the word "or" is used as well as the comma.)

b. A definition or explanation clue is also often indicated by a form of the verb "to be" as in these examples (the clues are underlined twice):

EXAMPLE #2: The development of the laser--that is, a device which concentrates high energies from radiation into a narrow, sharply focused beam of light--has practical applications in data transmission.

EXAMPLE #3: Indian paint brush is a type of showy herb that grows in the southwestern United States.

c. Sometimes a definition clue appears in the form of description. Again, a form of the verb "to be" is usually used.

CAUTION: Be sure the description is a fairly precise one before you rely on it for a definition. This sentence, "A gazelle has four thin legs and is very nimble-footed," is too general and vague to be a definition.

However, the following example is a more precise description, and therefore a good definition.

EXAMPLE:

The griffin was a mythological monster with an eagle's wings, head, beak and a lion's body, legs and tail.

In the following sentences use the definition clue to decide the meaning of the underlined words. Then, write those meanings on the blank lines.

1. "Each individual record, or logical record, is in block."

_____

2. "We must all soon learn how to compute in the metric system which is a decimal system of weights and measures universally used in science."

_____

3. "In all these examples, you are observing how plants and animals do their work or, in other words, their behavior."

_____

4. "The tape drive reads each time the data between two gaps or one physical record."

_____

5. "All the army's computer hardware, the computer and all of its mechanical, electrical, magnetic, and electronic parts, were lost for three months in a warehouse on Guam."

_____

6. "The second level of language that uses symbols rather than binary numbers, symbolic language, is translated into machine language by the assembler."

_____

7. "Data is the material the computer reads, writes, and stores."

_____

8. "An abacus, an ancient device used for mathematical calculations, was constructed of beads strung on wire."

_____

9. "Yet science has solved many difficult problems and this is surely a problem of great interest to all of us. As good a way as any to start on the puzzle is to make a sort of guess, a hypothesis, as to how the sun's family might have begun and to see how it works."

---

10. "As you have seen, living things must produce offspring to continue to live. Another name for producing offspring is propagation."

How did you do? If you missed more than one, check with your instructor. Otherwise, go on to the next objective.

OBJECTIVE 4

You will be able to determine the meaning of nine (9) out of ten (10) given words by using example clues.

STRATEGY

Examples are frequently used to provide a meaning within a context. Words which sometimes indicate this clue are:

like	such as	for example
especially	this	these
other	in that way	

EXAMPLE #1: The ENIAC is an example of a first generation computer.

EXAMPLE #2: Substances like hydrogen and oxygen that cannot be changed into component substances are called elements.

In Example #2 the meaning of "element" is made clear by two clues, an example clue ("like hydrogen and oxygen") and a definition clue ("substances that cannot be changed into component substances"). This combination is common in textbooks especially, since the writers are eager to emphasize and make certain ideas very clear and precise. In fact, many of the examples for this practise as well as others in this unit were taken from Business Data Processing required reading for many data processing students.

In the following practices, identify the example context clue. Then write your definition of the underlined word (determined by using the clues).

1. Data are recorded on the outside of the surface of magnetic drums, hollow cylinders revolving at a constant speed.
   meaning of magnetic drums _____

2. The printer, a code-sensitive output device, prints the data that it receives on a paper form.
   meaning of printer _____

3. Multiprogramming is an example of a system of computer use that increases the efficiency of a computer.
   meaning of multiprogramming _____

4. In special situations, desirable features of analog and digital machines have been combined to create a hybrid computer.
   meaning of hybrid _____

5. We have today many means of communication, especially language, that enable us to reach out to the whole world past and present for ideas worth learning.
   meaning of means of communication _____

6. The boys were lying still, heads down, inert, like dead men except for their loud and broken gasps for air.
   meaning of inert _____

7. A data processing system is a series of defined operations involving some type of electronic calculating equipment.

   meaning of data processing system _____

   _____

8. A synchronous and synchronous transmissions are examples of serial transmission techniques used in telecommunications.

   meaning of a synchronous and synchronous transmissions _

   _____

9. During the 1960's a number of small and cheap computers called minicomputers were introduced into the computer market.

   meaning of minicomputer _____

   meaning of the prefix mini- _____

10. I took an axe and smashed a few of the wooden rungs, much like heavy broomsticks, that are used to bar the boxes in which the gorillas are caged.

    meaning of rungs _____

Did you get at least nine of the sentences completely correct? Good! Go on to the next objective.

If you made more than one mistake, see your instructor for further explanation.

OBJECTIVE 5

You will be able to determine the meaning of nine (9) out of ten (10) given words by using "contrast clues."

STRATEGY

A clue to the meaning of a word can sometimes be found in an opposite word (antonym) or a contrasting idea. In using contrast clues to get an idea of the meaning of a word, you may have to search several sentences in front of and/or behind the word.

EXAMPLE #1: Although Mr. Manson guzzled liquor in great quantities every evening, his sobriety was without question during the business day.

Clue: How does drinking great quantities of liquor usually affect a person? That person becomes drunk. What word indicates that Mr. Manson was not affected in the normal way?

_____

Meaning: The context clue here is although, which shows contrast. From this clue we know that sobriety means "sober" or "not drunk".

EXAMPLE #2: The flaccid condition of his body was unlike that of Jim, who now exercises daily, watches his diet and has become thin and wiry.

Clue: unlike Jim's good physical condition

Meaning: out of shape

EXAMPLE #3: Sue is an experienced programmer, but John is still a novice.

Clue: situation - experienced (knowing how)

Meaning: not knowing how, inexperienced

Each of the following passages contains a "contrast clue". Below each passage write the following:

1) the clue that led you to the meaning of the underlined word, and

2) the meaning itself

HINT: The following words are usually clues to contrasting or opposite ideas:		
but	meanwhile	although
yet	not withstanding	however
on the contrary	or	on the other hand
nevertheless	otherwise	whereas

1. The programmer tried reading the boss's note but found it illegible. However, the analyst's was easy to read.

meaning of illegible _____

clue _____

2. Although the analyst is usually late in arriving at the office, he is punctual with his program deadlines.

meaning of punctual _____

clue _____

3. Luckily, the power failure was temporary; in a matter of moments the computers were back up.

   meaning of temporary _____

   clue _____

4. "Bye-bye" may be a suitable ending for a telephone conversation with a friend; nevertheless, it is completely inappropriate for an office.

   meaning of inappropriate _____

   clue _____

5. Most companies do their payrolls electronically, but ABC Company processes it's payroll manually.

   meaning of manually _____

   clue _____

6. She expected the cough medicine to help her cough; however, on the contrary, it seemed to aggravate it.

   meaning of aggravate _____

   clue _____

7. When the data processing students were instructed to run a sample program they thought it was unwise of the instructor to make them do it; later, however, they saw it as a very astute move.

   meaning of astute _____

   clue _____

8. The computer can be programmed to pick names randomly out of a list, or it can be programmed to pick names in some sort of pattern.

   meaning of randomly _____

   clue _____

9. "Archeological records reveal that primitive peoples use their fingers and piles of sticks to do their counting. Since human society was still at a rudimentary stage, these crude methods were sufficient for their needs."

   meaning of rudimentary _____

   clue _____

10. "Your account of the accident concurs with John's, but differs from the accounts given by others."

    meaning of concurs _____

    clue _____

Again, check your answers with the answer key. If you missed more than one meaning and/or clue, see your instructor. Otherwise, go on to the next objective.

OBJECTIVE 6

You will be able to determine the meaning of seven (7) out of eight (8) given words by using inference clues.

STRATEGY

This kind of context clue is a little more difficult to identify, but is frequently used. You need to learn to "read between the lines" and gather details to figure out the meaning. You will also need to search the context both in front of and behind the unfamiliar word. This type of clue is actually a combination of several types of clues, but there are no specific "give away" words for it.

EXAMPLE #1: Sharon told her roommate, "I'm through with blind dates forever. This one topped all! What a dull evening! I was bored every minute. The conversation was absolutely vapid!"

Clue: dull evening, bored every minute, through with blind dates

Meaning: a bore, dull, a "zero"

EXAMPLE #2: One of the most essential people in the entire computer operation is the repairperson. Since computer time is expensive, no company wants its computer to be down for very long. Thus, it is necessary to have a repairperson available continually to keep the machine up - in working order.

If you pay close attention to the sentences in Example #2, you will be able to infer that the third sentence tells why

it's necessary to have a repairperson on hand--to repair broken computers. You should be able to figure out that down, in computer terms, means not working. Even if you can't get the full meaning, you have enough meaning to go on reading.

Each of the following passages has an inference clue which will give you an idea of the meaning of the underlined word. Read each sentence carefully, then choose or write that meaning in the space below.

1. The odd combination of a breeze and a bright light can also cause sneezing. A skeptical veterinarian once set out to disprove this.

   The word closest in meaning to skeptical is:

   a. renowned
   b. typical
   c. doubting
   d. believing

2. In fact, the distinction between the small stand-alone computers in a computing network and intelligent terminals is becoming blurred. For example, some intelligent terminals can be programmed to perform error detections and data editing functions.

   meaning of intelligent terminal _____

3. The biotic community includes the plant and animal life within an area.

   meaning of biotic _____

4. To abate the pain, the doctor gave the patient a shot of novocain.

   meaning of abate _____

5. "Happy Days" on Channel 9 Tuesday nights, is not a true story; the incidents and characters are entirely fictitious.

   meaning of fictitious _____

6. The behaviorist movement gaining force in the twenties turned many persons towards the belief that virtually all human traits were "conditioned" and made suspect any evidence of basic or inborn differences.

   (The clue here is an opposite.)

   meaning of conditioned _____

7. And his consecutive games record went on and on. Sick or well, he never missed a game.

   meaning of consecutive games record _____

   _____

8. "Dialogue gives sparkle and life, but it can easily be overdone. Do not employ it for trivialities; do not let it become mere patter. Use it for important and critical encounters."

   meaning of trivialities _____

See your instructor upon completion of this section. He or she will check your answers on this part as answers may vary.

OBJECTIVE 7

(1) You will be able to identify reference (pronoun) clues and (2) you will be able to identify the correct referent of given pronouns in nine (9) out of ten (10) sentences.

STRATEGY

Another important context clue is the use of pronouns. Pronouns are words which replace nouns (persons or things). The noun is sometimes called the referent, the word to which the pronoun refers. Very often the referent is in a sentence before. Again, you will need to search the context. (For more explanation of referents, see IRS Booklet A-13.)

Identify what "they" refers to in each of the following sentences:

1. Many more people now live near the Delaware River. They have built many cities and factories.

   "they" refers to _____

2. The sewage and the chemicals have changed the water. They have polluted it.

   "they" refers to _____

3. Fish cannot live in the polluted water. They have all died.

   "they" refers to _____

Be careful to specify the correct referent when you are deciding which noun the pronoun is replacing. The word "they" in sentences 2 and 3 which follow refers to something in sentence 1.

1. All atoms of gold are alike.

2. They have the same kind of nucleus.

3. They have the same number of electrons.

To what does "they" refer?

a. all atoms
b. all atoms of gold
c. gold

Remember, pronouns are words that refer to or replace nouns. They are often used to avoid repetition.

In sentence 2 below, "it" is a pronoun. What noun in sentence 1 is the referent for "it"?

_____

1. A system of pulleys can raise the car's engine from its mounting by exerting a force which is smaller than the weight of the engine.

2. It exerts a smaller amount of force over a large distance.

"It" refers to:

a. the weight of the engine
b. the car's mounting
c. a system of pulleys

Write the correct referent (noun) that the underlined pronoun stands for in each of the following passages:

1. Both hail and sleet are solid, frozen forms of precipitation. The former is produced when raindrops freeze as they pass through sub-freezing air layers on their way to earth. The latter is formed when snow-flakes melt into rain and then refreeze into sleet.

   To what does "the former" refer? _____

   To what does "the latter" refer? _____

2. Machines that are used in connection with the computer are called peripheral devices. Those that are directly connected to the computer are on-line devices.

   "Those" refers to:

   a. connections
   b. devices
   c. machines
   d. computers

3. The control unit directs the step-by-step operation of the system. It selects instructions and data from main storage, interprets them, and controls the flow between main storage and the arithmetic unit.

   "It" refers to:

   a. operation
   b. control unit
   c. main storage

   "them" refers to _____

4. Frequently, each person who uses the computer will have access to it by means of some input device such as a teletype machine.

   "it" refers to _____

5. The computer is given the program through an input device and places it in main storage (memory).

   "it" refers to _____

Check your answers with the answer key. If you missed more than one see your instructor. Otherwise, go on to Objective 8.

OBJECTIVE 8

You will be able to name two limitations of using context clues in determining word meaning.

STRATEGY

You have learned that the context often gives hints of the meaning of words. However, it is also important to realize that:

1) the context sometimes has nothing at all to reveal about a word's meaning, and

2) the context may mislead you about the word's meaning.

What does the context of the following sentences lead you to conclude about the underlined words? Is your conclusion correct in each case? (Check with a dictionary after you have made a guess.)

1. "Corbett had lived in this noisome slum for only two weeks, but he would never forget the screaming voices, the angry quarreling, and the fighting that made slum life so unbearable."

   Your intelligent guess at the meaning of noisome:

   _____

2. "He was livid with rage."

   Your intelligent guess at the meaning of livid:

   _____

In these examples the context is a real fooler!

In sentence 1, both the context of the word noisome and also its structure suggest the meaning noisy. Upon using a dictionary, however, you will find the meanings offensive, distasteful, disgusting, ill-smelling. The word noisome comes from the same root word as annoy and is in no way related to noise.

In sentence 2, did you think livid meant red or flushed? It is a logical "guess" since you have probably seen people turn red with anger. However, the dictionary gives the meanings lead color, ashen, pallid and ghastly.

What help can you get from the context in these sentences?

> "The women had an in-depth discussion of philately that lasted well into the night. Their interest in the subject was so keen that they were unaware of the passage of time."

This is an example of a context which provides no clues to the meaning of the word. You must either already know the meaning of philately and then make sense of it in the context, or you must turn to an outside source--a teacher, a knowledgeable friend, or a dictionary.

Without looking back, name two limitations of using context clues:

1) _____

2) _____

Check your answers with the "Strategy" under Objective 8. If you missed either one, reread the examples under Objective 8 and see your instructor for further explanation if you have questions.

As one teacher has wisely st[illegible]

"Context is a magnificent help---BUT BEWARE!"

Here is a chart of guidelines for using context clues. You will probably arrive at some of your own as you read and use this technique.

DO'S AND DON'TS FOR USING CONTEXT
<u>Do</u> rely on context clues: 1. When you have a definite "unmissable clue"--a definition or direct explanation in the same paragraph. 2. When you have "highly reliable clues"--key words as explained in Objectives 2-6. 3. When you only need a general idea of what the word means.
<u>Don't</u> rely on context clues: 1. When you need an exact, definite meaning. (Context clues only give a general idea of the meaning of the word.) 2. When you don't know the meanings of the words nearby. 3. For technical words--key vocabulary which you are expected to know in your program or occupation. 4. When the word is a very important one--a key to the meaning of the whole sentence or paragraph. 5. When you have come across the word many times; if it is common in the materials you're reading, you'll want to learn its meaning completely for future reading.

REFERENCES USED FOR THIS UNIT:

Gallo, Donald, The Teaching of Vocabulary, University of Colorado, Denver Center.

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PERSONAL ACHIEVEMENT

READING

Data Processing

Finding Exact Meanings

FINDING OUT EXACT MEANINGS (Using Glossaries and Dictionaries)

As you read, you will come across words for which your skills in examining word parts and/or using the context are not enough when you need to know the exact meaning of a word. The purpose of this unit is to help you become aware of different sources for looking up new words and to help you learn how to use those sources.

Contrary to ideas you may have formed in grade school, a dictionary is not just a tool for boring drills and "copy-work". Instead, the dictionary is the most reliable source you can turn to if you want to learn or confirm your hunches about the meaning of a word. In addition to pronunciations and definitions, many dictionaries give information about the history of a word, synonyms (other words that mean the same thing), and antonyms (words opposite in meaning). Sample phrases and sentences also make the meanings of words clearer. All of these features help you better understand new or unfamiliar words.

When you learn how to take advantage of the many features of a dictionary and use it frequently, you strengthen your power to keep your vocabulary growing for life.

FINDING OUT EXACT MEANINGS - DATA PROCESSING

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OBJECTIVE 1

1. You will be able to quickly locate the appropriate section of the dictionary in which a word is found.
2. You will be able to arrange given words in alphabetical order.

STRATEGY

1. Read IRS Booklet A-23, "Locating Words in a Dictionary", p. 2-3 only.

2. Place these words in alphabetical order on the basis of their first letters:

   teletype, teleprocessing, chadless, gradient, optimize, inversion

   1) _____ 4) _____

   2) _____ 5) _____

   3) _____ 6) _____

   HELPFUL TIDBIT: Did you know that the prefix tele- means far off or distant?

3. Place these pairs of words in alphabetical order:

   1) capacity - calculus _____ _____

   2) return - retrieval _____ _____

   3) malfunction - marginal _____ _____

   4) demodulation - demand _____ _____

Check your answers with the answer key. If you missed any of these pairs or any item in practice 2, see your instructor.

4. Where would you look in your dictionary for these words? Put an X for each word on the line under the correct heading, front, middle, or back.

	(A-H) FRONT	(I-R) MIDDLE	(S-Z) BACK
a) pulse			
b) format			
c) numeric			
d) entry			
e) glossary			
f) overlays			
g) scaling			
h) memory			
i) digital			
j) state			
k) gap			
l) variable			
m) zone			
n) core			
o) telecommunication			

Check your answers with the key. Did you get all of them correct? Great! If you missed more than one see your instructor.

OBJECTIVE 2: Using Guide Words

You will be able to locate words in a dictionary by using guide words and alphabetical order.

STRATEGY

Read IRS Booklet A-23, "Locating Words in a Dictionary", p. 5-6.

PRACTICE 1: Locating Words in a Dictionary

In each box below, put an X before each word that you would expect to find on a dictionary page that has the guide words shown at the top of the box.

augend	automatic
_____ abacus	_____ autocoder
_____ assembler	_____ average
_____ augment	_____ alphabet
_____ analyst	_____ automatic
_____ audit	_____ address

patch card	pence
_____ patch card	_____ paycheck run
_____ pass	_____ pattern
_____ parity	_____ password
_____ peak	_____ punch
_____ path	_____ pulse

punch	quadratic
_____ pulse	_____ quad
_____ pure	_____ quinary
_____ queue	_____ radio
_____ push down	_____ quadratic
_____ random	_____ proof

track	transducer
_____ trapped	_____ trailer
_____ transcriber	_____ tribit
_____ transfer	_____ translator
_____ troubleshoot	_____ train
_____ transaction	_____ travel

Check your answers. If you missed more than two, see your instructor. Otherwise, go on to the next objective.

OBJECTIVE 3

You will be able to skim a dictionary entry and identify different parts of the entry in 8 out of 10 examples.

STRATEGY

Each word listed in a dictionary has a variety of information that goes with it. The word and all its information is called AN ENTRY.

Learn the different parts of a dictionary entry.

A B C D
re·tain (ri-tān') *v.* [ME < OF < L *re-back + tenere* to hold]

E 1: to hold on, keep in possession 2: to keep in a fixed state or condition 3: to continue to have or hold in [to retain heat] 4: to continue to practice or use 5: to keep in mind 6: to hire or arrange in advance for the services of

A. The first thing to appear in a dictionary entry is the word itself in its correct spelling, and after divided into syllables. Re·tain is shown in two syllables.

B. The second thing listed in a dictionary entry is the pronunciation of the word. This part of the entry, when used with the pronunciation key (which you will study more closely in the next objective) will tell you how to pronounce the word. It will give you not only the sound of the letters, but the number of syllables in the word and which syllable(s) is/are accented.

C. The third part of the entry indicates part of speech. If a word may be more than one part of speech (such as run--*verb* - Run to the store. and run--*noun* - I got a run in my hose.), both symbols will be given (*v.* verb and *n.* noun). Other parts of speech are as follows on the next page.

adj. - adjective

adv. - adverb

prep. - preposition

conj. - conjunction

art. - article

pron. - pronoun

A	B	C	D
re·tain	(ri-tān')	*v.*	[ME < OF < L *re-back + tenere* to hold]

1: to hold on, keep in possession 2: to keep in a fixed state or condition 3: to continue to have or hold in [to E retain heat] 4: to continue to practice or use 5: to keep in mind 6: to hire or arrange in advance for the services of

D. The next part of the entry is the origin of the word, or where the word came from. In the example above you see ME < OF < L. This means the word came to us from Middle English, and before that the word was Old French, and before that it had a Latin base. The explanation of these abbreviations is in the front of the dictionary.

C and D are reversed in some dictionaries.

E. The last part of a dictionary entry is the actual meaning of the word. Often a word will have more than one meaning, and these will be listed in the order they are most frequently used. In other words, the first meaning listed would be a much more common use of the word than the tenth meaning listed.

NOTE: When you use a dictionary, you usually don't need to know all the information given in an entry. By knowing which part of the entry contains the information you need, and by looking directly at that part of the entry, you can save yourself a great deal of time and confusion.

EXERCISE

Below are 5 dictionary entries. On your paper, answer the questions asked about each entry.

1. sa·voy (sə voi') n. [Fr. *cabbage of* Savoy] a kind of cabbage with crinkled leaves and a compact head

   Copy the pronunciation: _____

2. scraw ny (skrô' nē) adj. [Scand.] 1: very thin; skinny and bony 2: stunted or scrubby

   Copy the part of speech: _____

   What does that stand for? _____

3. skein (skan) n. [ME *skeyn* < MFr.] 1: a) a quantity of thread or yarn wound in a coil b) something like this, as a coil of hair 2: a flock of wild fowl

   Copy the origin of the word: _____

   How many syllables does the word have: _____

4. stel·lar (stel' ə r) adj. [LL *stellaris* < L. *stella*] a star 1: of the stars or a star 2: like a star, as in shape 3: by or as by a star performer; excellent, outstanding 4: leading; chief *a stellar* role

   What is the second meaning of the word? _____

   Copy the pronunciation of the word: _____

5. ten·et (ten' it) n. [L., *he holds* < *tenere*] a principle, doctrine, or belief held as a truth, as by some group

   How many syllables does the word have? _____

   What part of speech is it? _____

   What does the word mean? _____

SELF POST-TEST

For the following ten questions write on your paper which part of the entry is underlined.

1. Kob (käb) n. [< native name in Niger-Congo area, as in *Wolof Koba*] an orange-red antelope of SE Africa

   a. correct spelling and number of syllables (the word itself)
   b. pronunciation of the word
   c. part of speech of the word
   d. origin of the word
   e. meaning of the word

2. in·sure (in shoor') v. [ME. *ensuren*] 1: to contract to be paid or to pay money in the case of loss of (life, property, etc.); take out or issue insurance on (something or someone) 2: to give or take out insurance

   a. correct spelling and number of syllables (the word itself)
   b. pronunciation of the word
   c. part of speech of the word
   d. origin of the word
   e. meaning of the word

3. lei (lā) n. [Haw.] in Hawaii, a wreath of flowers and leaves, generally worn about the neck

   a. correct spelling and number of syllables (the word itself)
   b. pronunciation of the word
   c. part of speech of the word
   d. origin of the word
   e. meaning of the word

4. mome (mōm) n. [< ?] a blockhead, fool

   a. correct spelling and number of syllables (the word itself
   b. pronunciation of the word
   c. part of speech of the word
   d. origin of the word
   e. meaning of the word

5. mon·e·tize (män' ə tīz) v. [< L. *moneta* a mint + ize] 1: to coin into money 2: to legalize as money

a. correct spelling and number of syllables (the word itself)
b. pronunciation of the word
c. part of speech of the word
d. origin of the word
e. meaning of the word

6. o·men (ō' mən) n. [L. < OL. *osmen*] a thing or happening supposed to foretell a future event, either good or evil; augery

a. correct spelling and number of syllables (the word itself)
b. pronunciation of the word
c. part of speech of the word
d. origin of the word
e. meaning of the word

7. or·gan·ist (ôr' gə nist) n. [< MFr. or ML.] one who plays the organ

a. correct spelling and number of syllables (the word itself)
b. pronunciation of the word
c. part of speech of the word
d. origin of the word
e. meaning of the word

8. per·i·lune (per' ə lōōn) n. [< peri + lune] the point nearest to the moon in the elliptical orbit of a man-made satellite in orbit around it

a. correct spelling and number of syllables (the word itself)
b. pronunciation of the word
c. part of speech of the word
d. origin of the word
e. meaning of the word

9. pied (pīd) adj. [ME *pyed*, orig. black and white like a magpie] 1: covered with patches or spots of two or more colors; piebald; variegated 2: wearing a garment of this description

a. correct spelling and number of syllables (the word itself)
b. pronunciation of the word
c. part of speech of the word
d. origin of the word
e. meaning of the word

10. plex·i·form (plek' sə form) adj. [< plexus + -form] like, or in the form of, a plexus or network; complex

a. correct spelling and number of syllables (the word itself)
b. pronunciation of the word
c. part of speech of the word
d. origin of the word
e. meaning of the word

OBJECTIVE 4: Using a Dictionary for Pronunciation

You will be able to use a pronunciation key to decide the correct way to pronounce a word.

STRATEGY 1

Read IRS Booklet B-3, "Using a Dictionary for Pronunciation" P. 2-3.

PRACTICE 1

Complete Practice 1 on page 4 of IRS Booklet B-3. Check your answers with Card B-3 at the back of the IRS box.

STRATEGY 2

Read IRS Booklet B-3, "Using a Dictionary for Pronunciation" p. 5-6.

PRACTICE 2

Beside each word in the first column below is the special spelling to show how the word is pronounced. Use the pronunciation key at the bottom of the page to decide how to pronounce each word. If the word has one syllable, decide what other word in that line has the same vowel sound in it, and put an X in the blank before that word.

If the word has two or more syllables, notice which syllable is stressed. What vowel sound does that syllable have? Put an X in front of the word that has the same vowel sound.

EXAMPLES:

*shirr	(shûr)	_____	hear	__X__	fur	_____	hire
*rotor	(rō' tər)	_____	sun	__X__	no	_____	hot

PRONUNCIATION KEY

ă pat/ ā pay/ âr care/ ä father/ ĕ pet/ ē be/ ĭ pit/ ī pie/ îr fierce/ ŏ pot/ ō toe/ ô paw, for/ oi noise/ ou out/ o͝o took/ o͞o moon/ th thin/ th this/ u cŭt/ ûr turn/ yo͞o use/ ə about/ zh pleasure

1.	queue (kyū)	___ cube	___ loon	___ lost
2.	bouquet (bo͞o kā')	___ sweet	___ grape	___ suit
3.	moist (moist)	___ coil	___ toad	___ mouth
4.	rudiment (ro͞o'di mĕnt)	___ must	___ rude	___ roll
5.	poly- (pŏl' ē)	___ fed	___ bone	___ hot
6.	debris (dĭ brē')	___ wide	___ chest	___ feet
7.	hyper (hī' per)	___ wipe	___ wet	___ clean
8.	holo- (hō' lō)	___ coat	___ tent	___ need
9.	abacus (ăb' əkŭs)	___ game	___ fast	___ bend
10.	plumb (plŭm)	___ tune	___ would	___ cup
11.	debug (dē bŭg')	___ hut	___ time	___ ruin
12.	array (ă rā')	___ barn	___ bait	___ build
13.	cache (kăsh)	___ ball	___ lad	___ rain
14.	emulator (ĕm' ū lā tôr)	___ her	___ team	___ red

PRONUNCIATION KEY

ă pat/ ā pay/ âr care/ ä father/ ĕ pet/ ē be/ ĭ pit/ ī pie/ îr fierce/ ŏ pot/ ō toe/ ô paw, for/ oi noise/ ou out/ o͝o took/ o͞o moon/ th thin/ th this/ u cŭt/ ûr turn/ yo͞o use/ ə about/ zh pleasure

Did you get 12 or more correct? Good! If not, see your instructor before going on.

OBJECTIVE 5: Using a Dictionary to Get Meaning

You will be able to choose the meaning that makes the most sense in a given sentence from several meanings stated in a dictionary entry.

STRATEGY

Read IRS Booklet A-17, "Using a Dictionary to Get Meaning", pages 2, 3, 5.

PRACTICE

Complete the practices on pages 4, 6 and 7. Check your answers with Card A-17 at the back of the IRS box.

If you got 27 or more correct, go on to the next unit. If you missed more than three (3), see your instructor.

OBJECTIVE 6:

You will be able to name three sources besides a dictionary which help you find exact meanings of words and identify the location of these sources in materials used in your vocational program.

STRATEGY

1. Read the phrases below. Each one tells about a term in Data Processing that is important to know. (Numbers "c" and "f" are thrown in for good measure--see if you can figure them out!) The first letter will help you. Write the word in the blanks. You may use a dictionary.

a. plan for automatic solution to a problem

P _ _ _ _ _ _

b. to punch all rows of a card column

L _ _ _

c. What weighs many tons but falls without making a sound?

S _ _ _ _

d. a set contained within a set

S _ _ _ _ _

e. one who does analysis

A _ _ _ _ _ _

f. What planet do we see more often than any other planet?

E _ _ _ _

g. a device that expresses printed code as hard copy

*
P _ _ _ _ _ _

h. storage

*
M _ _ _ _ _

Now look at the starred (*) boxes. They spell the answer to this question: What is the closest place to look up the meaning of a word found in a textbook?

— — — — — — — —

(Clue: a list of words and their meanings usually found at the back of the book.)

2. One of the first things you should check when you get a textbook for one of your classes is whether or not it has a glossary.

Use a glossary in one of your texts to answer the following questions.

a. Words are listed in _____ order.

Yes, alphabetical order is correct.

b. An entry for a word usually gives _____ (number) definition(s).

c. Definitions for the words are (choose one):

1. general

2. specifically related to the subject you are reading about

Did you answer that there is usually one definition? Though the word may have several possible definitions, the glossary usually lists only the specific meaning as related to the subject you are reading about.

3. There are other ways of using your book to find out the precise meanings of words. These ways are reviewed below.

   a. Index

      This is usually located at the very end of the book. It tells you on what page (or pages) you can find specific information the book contains. A good index lists every subject that is discussed in the book. (For further explanation of an index, see IRS booklet A-25).

   b. Footnotes and Context

      Many times the author gives the definition for a technical word* on the same page, as is being done in this sentence. Sometimes, the authors include the meanings of words within the text material. Pay attention to the style and color of the print. These clues all save you from having to interrupt your reading further by turning to the back of the book or looking the word up in the dictionary. If the word is written in dark, heavy print, it is usually very important to your understanding of the paragraph. If the definition for a word is not given on the same page, check the glossary or the index at the back of your book.

4. The rule of thumb is to look for the closest available source for looking up the meaning of a word. Place these sources in order of their closest location:

   glossary, dictionary, index, footnotes/or context

   1) _____

   2) _____

   3) _____

   4) _____

* A word related directly to a particular subject area.

REFERENCES USED FOR THIS LEARNING PACKET

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2. Herber, Harold; Teaching Reading in Content Areas. Prentice-Hall, Inc., NJ, 1970.

3. Karlin, Robert; Teaching Reading in High School. Bobbs-Merrill Company, Inc. 1964.

PERSONAL ACHIEVEMENT

READING

Data Processing

Mastering Technical Vocabulary

Revised by Deborah A. Rozeboom
from Ellen Lamar Thomas and
H. Alan Robinson, *Improving Reading in Every Class: A Sourcebook for Teachers;* copyright by Allyn and Bacon, Inc., 1972, pp. 297-304. Reprinted with permission. Some word changes have been made for easier reading.

PRE/POST TEST
MASTERING TECHNICAL VOCABULARY

STRATEGY 1

List at least three (3) ways an author may alert you to important terms in your text.

1. _____

2. _____

3. _____

STRATEGY 2

List at least eight (8) things to do to learn a new technical term.

1. _____ 5. _____

2. _____ 6. _____

3. _____ 7. _____

4. _____ 8. _____

STRATEGY 3

Explain what the "divided page glossary" is, and how it may help you learn new terms.

STRATEGY 4

Explain what a "cover card" is, and how it may help you learn new terms.

STRATEGY 5

Explain how using your auditory and motor channels help you remember new terms.

STRATEGY 6

Mark the following statements True or False

____ Your greatest time for forgetting is within 24 hrs. after you first heard something.

____ It is a good idea to review a previous assignment immediately before going on to a new assignment.

____ It is better to study an assignment once, for a large amount of time, then several times for shorter amounts of time.

STRATEGY 7

Explain why you should set your own goals for learning new vocabulary.

ANSWER KEY
PRE/POST TEST
MASTERING TECHNICAL VOCABULARY

STRATEGY 1

1. heavy type
2. italics
3. colon, also underlining

STRATEGY 2

any 8 of the following

read to understand
look for familiar word parts
reread
study the examples
make up counter examples
be active with your pencil
use your index
self-recite
review
use your new words

STRATEGY 3

Divided page glossary is a form used to make your own glossary, with terms written on one side of the page and their meanings on the other. It is an orderly way to collect, store, and learn new terms.

STRATEGY 4

A cover card is simply a card used to cover up meanings or terms to check your memory when you are trying to learn terms. It helps you concentrate on what you are studying.

STRATEGY 5

By using your sight, voice, hearing, and muscles to study a word you learn the word through a variety of senses and therefore learn the word better.

STRATEGY 6

T, T, F

STRATEGY 7

By setting your own goals, what you learn is meaningful to you, and applies directly to your needs.

MASTERING VOCABULARY

Here's a method that can help you lift your vocabulary well above its present level. It's tailored to your individual preferences. You decide the words you want and need. You collect them when time is available, and not when it isn't. You set your own goals and move toward them as you wish. This method will help you not only learn, but also remember the meanings for new vocabulary words.

HOW TO MASTER THE VOCABULARY OF DATA PROCESSING
(Put These Tips to Work, and Your Dividends May Be Dramatic)

As you begin a new course in Data Processing it may seem as if you're learning a foreign language. Difficult new technical terms crowd the pages. Easy, familiar words appear with unexpected new meanings. The everyday word between suddenly becomes technical - with an extremely precise meaning! The word exactly takes on a special meaning--even any, if and or.

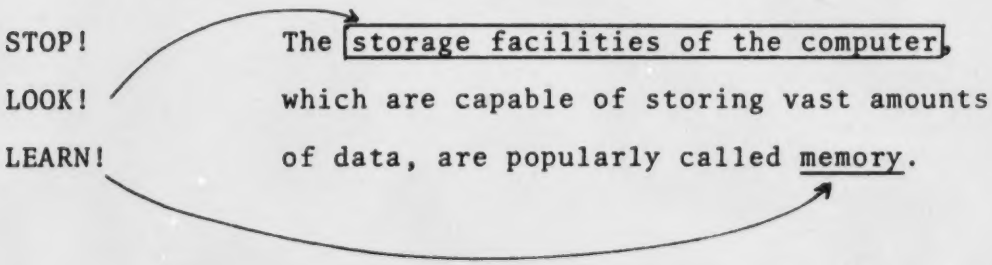
Rote memory is no longer enough. You must gain a working understanding - learn to use the new "word tools" well and intelligently. Once an unfamiliar term is defined, or a familiar term defined again, the authors will use it again and again, taking it for granted that you understand it. If you pass over these new terms lightly, word blocks will soon get in the way of your learning. Your reading will become an obstacle course. Learn the new terms thoroughly when they're introduced, and you'll have precision tools for grasping essential new knowledge to the last day of the course.

Clearly, your vocabulary abilities now become a tremendous asset. Fortunately, learning experts - in actual experiments with students - have researched learning and memory techniques. Some of the strategies suggested here are based on years of experimentation in the psychology of learning.

STRATEGY

How Will the Author Alert You to Important Terms?
When the key terms or concepts are first introduced to you in textbooks, the authors usually flag you with a conspicuous signal. The signal used may be heavy black (boldface) type, *italics*, color, and underlining. Words signalled in these ways are crucially important "official" Data Processing terms.

In the passage below the authors make an important term stand out on the page by underlining it.


STOP!
LOOK!
LEARN!
The storage facilities of the computer, which are capable of storing vast amounts of data, are popularly called memory.

ACTIVITY

Scan your own textbook and see how the authors signal important new terms. List those ways here:

Sometimes there is an "explosion" of new words - like the one below - in a very brief space. Yet every new term is basic for your future learning and calls for thorough learning and remembering

TOOLS FOR FUTURE LEARNING — The magnetic disk drive, the magnetic drum unit, and the data cell are all code sensitive, random-access devices.

TIPS FOR LEARNING DIFFICULT TECHNICAL TERMS

1. Pay attention to each term when it first appears. Read so that you understand the definition - not to memorize, but to get a real understanding of the meaning.

2. Take the new word apart if you can. Do you recognize a familiar part? If, for example, you recognize the familiar prefix poly-, meaning many, you already have a hold on polygamist, polygraph, polyglot. If you recognize the word part, equi- meaning equal it helps you unlock equidistant, equivalent, and equation. The familiar prefix co-, meaning with or together with, can help you understand coordinate, cooperate, and co-worker. (See Unit I for more word part clues.)

3. Read and reread as often as necessary. Reading-once-straight-through patterns are not very helpful. Complete stops are called for frequently. Thought time is essential in addition to reading time.

4. The author's definition of a new term is almost always followed by examples. Examine these examples and figure out whether in fact they do follow the definition.

5. Try to think of counter examples, examples which do not come under the definition. When thinking of these, you may find it helpful to change a word or two in the definition.

6. Read the definition as you read all Data Processing materials, pencil in hand. Make notes and create your own examples.

7. Suppose as you are reading the definition of the new term, you come across a technical term you've already met in the course whose meaning you don't remember. We all forget! You have the meaning right at your fingertips through the index of your book. Use your index for instant access to the original explanation of the forgotten term.

8. As you're working with the new term, try to express its meaning in actual words - your own words.

9. You may find a "List of Some Important Terms to Learn" toward the end of each chapter. You will want to check your understanding of this list of terms. The terms the authors have selected for this list are crucial. You may also want to check your own list of key words and their meanings.

10. Make an effort to use your new Data Processing terms.

IN SUMMING UP

1. Read to understand.
2. Look for familiar word parts.
3. Reread.
4. Study the examples.
5. Make up counterexamples.
6. Be active with your pencil.
7. Use your index.
8. Self-recite.
9. Review.
10. USE YOUR NEW LEARNINGS

MASTERY OF NEW TERMS

Should you memorize the meaningsof new terms? Chances are you won't need to. Memory of the meanings of new words will often come about naturally as you go over the material, reread, do problems. This is not to encourage imprecise half-learning of essential terms. Terms in Data Processing are defined rigorously. It is essential to get strict meanings in mind. Remembering a very close version of what has been said will be a tool in future learning.

KEY WORDS SHOULD BE "COLLECTOR'S ITEMS"

Set aside a section of your notebook as a Data Processing Glossary. As you run across each new key term, collect it for your glossary. Keep this record up to date from day to day. Take about two minutes - that's all you'll need - to make each entry.

You may find the "divided page" handy. Make a line down the middle of a page in your notebook. In the Key Term column to the left, record the new word. In the Meaning column to the right, write the meaning carefully.

The divided page is handy when review time comes. The dividing line makes it possible to conceal the meaning completely as you check your understanding of a term later.

Mark the end of each unit - perhaps with a double line. Now when you want to go back and check on the new words you've studied in a certain unit, you'll know exactly where to find them.

If you were to do nothing more than record the new words you'd met in a unit and then lose your glossary, you would still have an advantage. The muscular act of writing, in and of itself, would have already strengthened your learning.

THE "DIVIDED PAGE"

Key Term	Meaning
	Test your understanding by covering this side.

ACTIVITY

Turn to a chapter you are presently studying in one of your course textbooks. Locate and record ten (10) key terms and their meanings in your glossary. Congratulations . . . you now have the beginnings of a helpful tool! Use it as you read further for class.

USE THE "MOST POWERFUL STUDY TECHNIQUE"

Students often ask, "How can I retain what I study?" You can learn for the future with the most powerful study technique known to psychologists!

Conceal the right-hand side of your divided page with your hand or with a cover card (index card) and try to express the meaning - not by memory, but with full understanding of what you are saying. Then lift the card and check. Continue checking until you have full understanding. Mark items that are especially difficult, and double-check these next time.

You'll find a cover card handy in other ways. Using a card to work through chapters as you review is often more effective than rereading. You can reread material and dream all the way through. The cover card forces you to concentrate as you struggle to recall what's underneath.

USE YCUR SENSES FOR FASTER, FIRMER LEARNING

Multisensory study can speed and strengthen your learning. Eyes are just one of your learning channels. Use your eyes only, and you turn on just one-third of your sensory channels for mastering a new term. What other learning channels can you use? Your auditory and motor channels.

"See it!
Say it!
Hear it!
Draw it or write it!"

As you study, see the material as you read the word and think about its meaning.

Then say the new term and formulate its meaning aloud or in a whisper. Now you're adding kinesthetic learning. As you form the sounds, the muscles of your throat, tongue, and lips are reinforcing your memory.

And as you say it, hear it. Now you call in hearing, another learning channel.

Draw a figure to illustrate the term or write down its meaning. Now you bring more learning power into play--your motor equipment. Write down just a key word or two in the definition as you express the meaning to yourself. Pencil work helps concentration; it has a "no-doze" effect.

Any writing you have already done - on a scratch sheet or on the divided page - has already reinforced your learning.

"See it! Say it! Hear it! Draw it or write it!" is all-out study - a four-way reinforcement. The variety itself helps you recall. The change of pace - eyes, ears, voice, pencil - keeps you alert and increases absorption.

ACTIVITY

Use the technique you've just read to learn the ten (10) words on your glossary list. When you feel confident that you know the words, see your instructor for a post-test.

TO RETAIN LONGER, SPACE OUT YOUR REVIEWS

You can remember longer simply by the way you place your reviews. You can place your first review to minimize forgetting. Suppose you read your class assignment today. When will forgetting take its greatest toll? If your forgetting is typical, the greatest loss will be within one day. Arrange your first review to check this drop. Place it from 12 to 24 hours after you study your vocabulary terms. Reinforce immediately, and you will remember much longer. It might be a good idea to review the previous assignment immediately before going on to the new assignment.

A study expert pointed out the "Curve of Forgetting" to military officers returning to academic study after being out of school for several years.

The first student studied one hour on September 30, and six weeks later remembered very little.

FIGURE 6–7. Curve of forgetting. (Drawing reproduced by permission of Dr. Staton.)

* Thomas F. Staton, *How to Study* (Montgomery, Alabama: Box 6133, 1968), p. 59. The drawings are reproduced with permission.

The second student studied only 30 minutes on September 30, but he spaced out his reviews - 15 minutes on October 1 and 10 minutes more on October 8. On November 8 it took this student just a 5 minute review to bring back what he wanted - with 100% mastery.

FIGURE 6-8. Spaced reviews. (Drawing reproduced by permission of Dr. Staton.)

Both students studied just one hour, but the one who spaced out his reviews had far better retention.

Your glossary of terms lends itself to spaced reviews. You can have a quick run-through waiting for a friend, riding to school, waiting for a bus, between classes, just before a test.

Take care, though, that your run-throughs don't become unthinking, mechanical repetitions. Your instructors hope that as you review your terms and their meanings, you will focus on what the definition is really saying. They sound this warning: Though precise understanding is absolutely essential, too much stress on memorization of words may destroy your understanding of their real meanings.

You'll find that spaced-out reviews will pay you high dividends in aspects of Data Processing other than vocabulary and in other school courses as well.

LEARN THE NEW TERMS FROM DAY TO DAY! THEY'LL BE YOURS TILL THE LAST DAY OF THE COURSE - AND BEYOND - AS TOOLS FOR GRASPING ESSENTIAL NEW KNOWLEDGE.

ACTIVITY

Review the same ten (10) words you were tested on at one and two weeks from today. During the fourth week, give yourself a quiz to see how much you remember at that point.

SET YOUR OWN GOALS FOR VOCABULARY

Only you can set goals for yourself! Only you can move toward them!

If you've decided to start a personal word collection, please set goals for yourself as suggested below. You'll want to consider your test score, your own judgement as to what you need, and any suggestions from your teacher.

The goals you set today are only tentative. You may wish to change them as you make progress. Your goals should be realistic. Planning more than you can possibly attain brings only disappointment.

Your teacher will discuss your goals with you.

TO IMPROVE VOCABULARY	PLANNED	FINISHED
1. How many words do you plan to have in your personal word collection (and really learn) before the end of this month?	____	____
2. Have you decided to collect a definite number of words each day? week? If so, what is your quota?	____	____
3. Some students prefer not to set a daily or weekly quota, but to collect their new words whenever the reading they are doing at the moment lends itself. If this is your decision, indicate by checking here. ____		

PERSONAL ACHIEVEMENT

READING

Data Processing

Inference

INFERENCE

Data Processing

OBJECTIVES:

Objective 1: Identify 10 out of 12 referent pronouns in given examples.

Objective 2: Identify what is literally stated in 10 out of 12 given examples.

Objective 3: Identify what is implied in 8 out of 10 given examples.

Objective 4: Distinguish between what is stated and what is implied in 8 out of 10 given examples.

Objective 5: Identify what is implied in 10 out of 12 negatively constructed examples.

INFERENCE

Data Processing

Here is a packet that will help you understand what you read more fully. Sometimes an author will come right out and say exactly what she/he wants you to know. But sometimes an author will expect you to figure out information by "reading between the lines," by taking what she/he said, and figuring out for yourself what is meant. This is called INFERRING. The skill of reading between the lines to see what is implied is called INFERENCE.

In this packet you will look at several different types of inference, and practice reading between the lines. You will need to be able to apply the skill to your textbooks in Data Processing.

OBJECTIVE 1: Identify 10 out of 12 referent pronouns in the given examples.

Words that stand for other words that name someone or something are called pronouns. Pronouns do not mean anything by themselves. They have meaning only because they stand for other words.

When you are reading, you will come across words like he, her, you, their, it, and them. It is very important for you to know who or what those words stand for.

EXAMPLE: The underlined words are pronouns.

1. This program is not hard to run. It is simple.
2. The instructor gave us a clear explanation. He was easier to understand than the book.
3. My family is driving here for my graduation. They are proud of me.
4. The puppies and the children were great friends. I was not surprised they got along so well.

Ask yourself, "Is there someone or something named in these sentences for which the pronouns would stand?" In number 1 the pronoun it could logically stand for program. Program is not someone, but it is something.

What do the pronouns stand for in sentences 2 - 4?

2. He _____
3. They _____
4. They _____

Does the pronoun stand for someone or something?

2. He _____
3. They _____
4. They _____

In the following story you will find 13 underlined and numbered pronouns. On your paper write the word(s) of the person or thing the pronoun stands for.

Wally and Joan decided that they[1] should build a house for Brandy. He[2] was their new puppy, an Irish setter only six weeks old. Brandy could take naps in the house or keep dry in it[3] during a storm. "Where should we[4] buy the wood?" Wally asked his[5] wife. Joan said, "Our neighbor Bob said we[6] could use the boards piled in his[7] garage. You[8] pick out the wood, and I[9] will find the tools and nails." They[10] had been working all morning when Joan's sister, Jodi, appeared. "How do you[11] like this little house we[12] built?" she[13] asked.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____

If you missed more than three, see your instructor before going on.

SELF POST-TEST

Write the word or words that the underlined pronoun stands for:

Machines that are used in connection with the computer are called peripheral devices. Those[1] that are directly connected to the computer are on-line devices. Those[2] that are not connected to it[3] are off-line devices.

1. _____
2. _____
3. _____

After the cards have been punched, they[4] are placed in a card reader. This[5] is an input device.

4. _____
5. _____

The payroll program will show the proper deductions that must be made from the employees' wages or salaries to pay for the dental insurance for those[6] who have decided to take it[7].

6. _____
7. _____

The first punched cards appeared in 1890. They[8] were developed by Herman Hollerith, who[9] used them[10] for processing and storing data from the U.S. census from that year.

8. _____
9. _____
10. _____

Mistakes usually occur because the computer is doing exactly what it[11] was told to do. It[12] was a human and not a mechanical error.

11. _____

12. _____

OBJECTIVE 2: Identify what is literally stated in 10 out of 12 examples.

Sometimes in our reading we put more into what we read than the author intends. Because of personal experience or knowledge, we assume the author means something she/he did not say. Especially in textbooks it is important to be able to identify what the author said, without adding our own meaning that may lead to incorrect understandings.

EXAMPLE: Read the instructions extremely carefully. Read the brief story. Assume that the information in it is entirely accurate and true. Refer to the story as you wish. Determine whether each of the numbered statements is

T----------definitely true

F----------definitely false

?----------uncertain, may be true or false

and write T or F on your paper.

The Story

A businessman had just turned off the lights in the store when a man appeared and demanded money. The owner opened a cash register. The contents of the cash register were scooped up and the man sped away. A member of the police force was notified promptly.

1. After the man, who demanded the money, scooped up the contents of the cash register, he ran away. T F ?

2. A man appeared after the owner had turned off his store lights. T F ?

3. The story concerns a series of events in which only three persons are referred to--the owner of the store and a man who demanded money, and a member of the police force. T F ?

4. The man who opened the cash register was the owner. T F ?

a. Do we know that the man who demanded money was the person who scooped up the contents of the cash register? We don't know that for sure. The story does not state who scooped up the contents of the cash register. Also, did the man run away? The story said he sped away. That might mean that he had a car waiting outside.

b. Do we know that the owner of the store is a man? No, and we cannot assume that the person who turned off the lights was the owner. The businessman and the owner may be two different people.

c. There may be a fourth person if the businessman and the owner of the store aren't the same person.

d. The story does not say that the owner of the store was a man. So, while it does say the owner opened a cash register, it does not say the owner was a man.

The answer you should have written for all four was "?".

Indicate whether the five (5) statements below were stated or were not stated in the paragraph below.

Mr. Albert has worked as a programmer for a large manufacturing company for years. The company has always provided health insurance for its employees. Recently the company decided to offer dental insurance to its employees also. The employees are going to pay half the cost and the company, the remainder. The program is optional, so the company has asked Mr. Albert to design a data collection operation to determine who wants the dental insurance. He has also been asked to write a program that updates their files--that is, that makes the information in the files current.

1. Mr. Albert is the head programmer for his company.

   a. stated
   b. not stated

2. All company employees will now have dental insurance.

   a. stated
   b. not stated

3. Mr. Albert works for a large manufacturing company.

   a. stated
   b. not stated

4. Health insurance includes maternity coverage.

   a. stated
   b. not stated

5. Mr. Albert has been asked to update employee files.

   a. stated
   b. not stated

If you missed any of these questions, see your instructor before going on.

SELF POST-TEST

Read the following paragraphs. Then tell whether the 12 items listed below are actually stated in the paragraph or not actually stated in the paragraphs. You may refer back to this article when answering the questions.

Writing programs in machine language has several disadvantages. For example, operations codes can be difficult to remember. In the IBM 360 computer series, for example, the "add" instruction may be written 0101 1010 or 1111 1010. Another major disadvantage is that the programmer must act as clerk and keep track of every address in the program. This means that the address of every instruction and every data field must be calculated and recorded.

To lighten the burden of the programmer, symbolic programming languages have been developed. Symbolic languages replace the machine language operation codes and operands with easier-to-remember symbols. The mnemonic (memory device) A will stand for "add", instead of 0101 1010, and S may signify "subtract", instead of 0101 1011. The operand will not only be written in a symbolic language similar to English; it will also indicate what the data field is used for. In addition to making programming easier, symbolic language can be used to construct programs that will instruct the computer to act as a clerk in calculating and recording the addresses of instructions and data fields, thereby relieving the programmer of this chore.

SELF POST-TEST (cont.)

1. Writing programs in machine language has some disadvantages.

   a. stated
   b. not stated

2. Writing programs in machine language has some advantages.

   a. stated
   b. not stated

3. Symbolic language can be used to lessen the job of the programmer.

   a. stated
   b. not stated

4. Mnemonic means memory device.

   a. stated
   b. not stated

5. Operation codes may be difficult to remember.

   a. stated
   b. not stated

6. An operand may be written in symbolic language similar to English.

   a. stated
   b. not stated

7. Through the use of symbolic language, the computer may eliminate the need for a programmer.

   a. stated
   b. not stated

8. Through the use of symbolic language, a computer may do a clerk-type job instead of the programmer.

   a. stated
   b. not stated

9. Operation codes <u>may</u> be easy to remember.

   a. stated
   b. not stated

If you missed more than 2, see your instructor before going on.

OBJECTIVE 3: Identify what is implied in 10 out of 12 given examples.

In Objective 2 you were asked to identify only what was actually stated. Now you are going to look at sentences where you have to read between the lines to figure out what the author wants you to know.

In the following sentences read between the lines to figure out what the author wants you to know.

1. The gray clouds rolled by as the wet street glistened. The soggy leaves filled the gutter, and children jumped in the puddles.

What can we infer about the weather? We can infer that it has been raining. There are several clues to that inference. List four clues that infer that it has been raining:

1) _____

2) _____

3) _____

4) _____

2. The machine hummed softly then whirred for a moment, with the needle jabbing up and down through the cloth. The thread spun silently out of its spool.

What kind of a machine is this? _____

List at least 3 clues that tell you what kind of a machine this is:

1) _____

2) _____

3) _____

Read between the lines in the following sentences and use your knowledge to <u>infer</u> the last word or words in the sentence.

1. Identifying the lost child was difficult because he was too young even to know his last

   a) name.
   b) home.
   c) parent.
   d) visit.

2. His lifelong ambition had been to become a famous writer, and at last his desire had reached its

   a) decision.
   b) recovery.
   c) destruction.
   d) fulfillment.

3. If it rained he feared floods; if the sun shone he was certain that drought would follow. In every cloud he saw only

   a) fleecy white sheep.
   b) the dark side.
   c) a clever student.
   d) beautiful raindrops.

4. The president's speech was very serious. Not once did he

   a) frown.
   b) applaud.
   c) shout.
   d) smile.

5. A computer can remove many of the routine and dull tasks from our lives, thereby leaving the individual more time for

   a) creative work in which he is interested.
   b) the work.
   c) a long vacation.
   d) other dull jobs.

6. Writing programs in machine language has several disadvantages. For example

   a) computers can store information.
   b) operation codes can be difficult to remember.
   c) computers may add fractions.
   d) time may be saved.

7. The most obvious advantage of using an electronic computer is speed. The speed with which a computer can operate is

   a) slow.
   b) faster than light.
   c) time saving.
   d) frustrating.

8. The advantages of speed and accuracy can be directly measured in dollar savings realized. Computers

   a) are expensive.
   b) help save money.
   c) work well.
   d) waste money.

9. The engineer was tired and hungry. Unable to concentrate on anything she

   a) finished the program.
   b) made an error in her work.
   c) started a new project.
   d) smiled.

10. He opened his eyes and looked at the clock. He jumped out of bed, skipped breakfast and his shower, ran to the bus stop and hoped that

    a) he would get to his vacation spot on time.
    b) would see someone he knew.
    c) would not lose his glasses.
    d) would not be late.

SELF POST-TEST

Read each of the items below. Then choose one of the statements below each item that tells what the author wants you to infer.

1. Peanut shells take on the color of the soil in which the nut is growing. Most people prefer not to buy dark-shelled peanuts, and will not pay as much for them as for light-shelled nuts. From this we can infer that

   a) light colored soil is most desirable for peanut growers.
   b) fertile marshland is helpful to peanut growers.
   c) peanuts should be grown in long straight rows.
   d) peanuts are planted in the early spring.

2. The color of most animals is that which will match or blend with that of their surroundings. Therefore we can infer that leaf-eating caterpillars are

   a) numerous.
   b) quite small.
   c) green.
   d) fuzzy.

3. The interviewer smiled at the job applicant. The interview had gone well. The interviewer held out his hand and said, "Your credentials are very impressive. You're just the type of person we can use. You'll be hearing from us in a few days." The interviewer wants the applicant to infer that

   a) the interviewer was joking.
   b) the job applicant would be offered the job.
   c) the interview was beginning.
   d) the job applicant was a woman.

4. The computer was down (not working) and the commanding officer was upset. "How will we receive and decode the messages our headquarters sends us?!" he yelled. We can infer that

   a) the computer would be fixed soon.
   b) the commanding officer was a general.
   c) the computer was used to intercept enemy messages.
   d) the computer was used to communicate with upper command people.

5. The program was well designed, the computer was working, and the operator was experienced. Yet the computer could not complete the problem. It can be inferred that

   a) the computer was unplugged.
   b) the program was poorly designed.
   c) the operator made an error.
   d) the computer was bewitched.

6. The botanist was working on a research project in corn cross-breeding. She had developed intricate formuli to describe her genetic and chemical work but had not tried out her formula in the field, with actual corn plants. She packed up her papers and walked over to the computer lab to continue her work. We can infer that

   a) the botanist is in love with a computer programmer.
   b) the botanist knows how to operate a computer.
   c) the botanist has too many papers.
   d) the botanist is going to use the computer to try to predict the outcome of the field tests.

7. The teacher wanted to know how many students had registered for the spring quarter. He called the registrar's office and later in the day was sent a print-out of the students who had registered for his class. We can infer that

   a) registration information was stored in a computer.
   b) the registrar was a magician.
   c) the registrar rented a computer.
   d) the registrar was a computer operator.

8. A small pocket calculator may be beneficial to people in doing everyday chores, such as balancing a checkbook or figuring a budget. The machine can usually calculate faster than people. With some people it takes longer to use a calculator than doing their own computations. With these people we can infer

   a) they don't know how to operate a calculator.
   b) they are dumb.
   c) the calculator is broken.
   d) they forgot to recharge their calculator.

9. The fish washed up on the beach in piles. When the sun came out they began to smell bad. But the black gooey substance covering the fish made them difficult to clean up. And it would be just as bad if they washed out again. We can infer that

   a) the fish were killed by poison.
   b) the fish were killed by an oil spill.
   c) the fish were in the ocean.
   d) the fish were alive.

10. The company was not big enough to buy a computer. It didn't need one all of the time. But it did need computer services some of the time. We can infer that

   a) the company hired a lot of accountants.
   b) the company rented a computer sometimes.
   c) the company did without computer services.
   d) the company went broke.

If you missed more than two, see your instructor before going on.

OBJECTIVE 4: Distinguish between what is said and what is implied in 8 out of 10 given examples.

It is necessary to be able to identify what is stated and what is only implied by an author. If an author says

"1000 computer hours were spent on that program",

you know exactly how many computer hours were spent on the computer.

If an author says

"Many computer hours were spent on that program",

we don't know exactly how many hours were spent but we might infer that about 1000 hours were spent on the program. Look for what the author actually says and what she/he means.

Let's look at a very simple example that you are familiar with from childhood:

Mary had a little lamb,
It's fleece was white as snow,
And everywhere that Mary went
The lamb was sure to go.

The poem actually tells us that someone named Mary had a small white lamb that accompanied her everywhere.

What is implied is that the lamb liked Mary and for that reason followed her everywhere. If we are careful readers we will note that nowhere does it actually come out and say that the reason the lamb goes everywhere with Mary is because it likes her. We have to consider the possibility that Mary has this lamb on a rope and drags it with her everywhere.

EXERCISE: Read the short paragraph below. Then tell whether the statements below the paragraph were actually stated, were implied, or were neither stated nor implied.

"Computers will not replace people. They are much faster as they process, but think about these facts: the human brain is about the size of a grapefruit. It weighs less than a pound.

The first electronic computer weighed 60,000 pounds. They are getting smaller, yet a full-sized computer takes up most of the space in a large room. Most weigh at least a ton. The human brain stores 10,000 times the information that the best computer can store. Lastly, the computer will not work unless the data are fed into them in certain ways. People must provide the data, and in the right way."

	STATED	IMPLIED	NEITHER
1. The first electronic computer weighed 60,000 lbs.	___	___	___
2. Human brains have some advantages over a computer.	___	___	___
3. Computers might replace people.	___	___	___
4. Computers work only because people exist.	___	___	___
5. The brain stores more information than the computer.	___	___	___
6. Computers are getting bigger.	___	___	___

SELF POST-TEST

Read the following paragraphs then tell whether the following statements are implied or actually stated.

"The electronic computer has become one of the most important management tools of business and industry. NASA is helping the advancement toward greater efficiency by making available computer programs at modest cost. The U. S. computer industry now does about 10 billion dollars' worth of business a year. American computer exports have increased 1,400 percent in ten years. Almost every major computer system in the world is made in the United States. In fact, NASA-developed computer programs have proved to be one of the most important fringe benefits from our space program.

For example, NASTRAN is an acronym for NASA structural analysis. More than seventy industrial firms, universities, laboratories, and government agencies are now using it to solve their structural engineering problems. This computer management system has been adapted to many applications, ranging from suspension units and steering linkages on automobiles to the design of powerplants and skyscrapers. Several more uses are in the planning stage.

NASTRAN is a general-purpose digital computer program originally conceived to analyze the behavior of elastic structures in the space program. One of its major uses has been in the design of the space shuttle. Since it was first made publicly available in November 1970, hundreds of engineers have

become acquainted with its application to industrial management. The computer program is considered virtually indispensable by many structural and design engineers, who estimate that two-thirds of the projects in which it has been applied would not have been attempted without it.

	STATED	IMPLIED
1. Almost every major computer system in the world is made in America.	____	____
2. NASTRAN was conceived originally to analyze the "give" or brittleness of materials used in space.	____	____
3. NASTRAN's main use outside space work seems to be in management.	____	____
4. The NASTRAN computer program has been adapted to suspension units.	____	____
5. NASA is not just involved with space exploration, but also the development of equipment for other uses.	____	____
6. The word an "acronym" means "stands for".	____	____
7. Many structural and design engineers have come to depend on NASTRAN.	____	____
8. The NASTRAN was made available to the public in 1970.	____	____
9. NASTRAN can be used in a whole variety of projects.	____	____
10. There are different types of computer systems.	____	____

	STATED	IMPLIED
11. NASA has something to do with our space program.	____	____
12. Universities are using NASTRAN.	____	____

If you missed more than 2, see your instructor before going on.

OBJECTIVE 5: Identify what is implied by negation in 10 out of 12 examples.

Many times in our reading an author will give us conditions under which things will happen, such as

The band will play if we pay them $500.

As readers, we must ask ourselves "What if those conditions aren't met? What if the opposite takes place?" Will the band play if we don't give them $500? Will they play if we give them, say, $400?

We must constantly be asking ourselves the question:

What will happen if this is not the case?

EXAMPLES:

1. "In group printing operations, only one line is printed for each group of detail lines."

   ASK YOURSELF: What can you say about the number of lines printed for reports which are not group printed?

2. "The matching-fields specifications can be used even though not all of the record types in the file contain the fields used for matching."

   ASK YOURSELF: Can the matching-field specifications be used if all the record types in the file contain fields used for matching?

3. "Rain washes away larger amounts of earth when it falls upon loose materials, such as clay or sand, than when it falls upon hard rock formations. In areas where the bedrock formature is hard, and the soil is firm and stony, the streams are generally clean.

   ASK YOURSELF: What will the streams be like where the bedrock and soil are not hard and stony?

In the space provided below, write the question(s) a good reader should ask her/himself about the conditions stated in the sentences. The first one has been done for you.

1. Different kinds of turtles have different dispositions. Mud turtles and snapping turtles are inclined to be ill-natured.

   QUESTION: *What are the dispositions of other kinds of turtles?*

2. A dull job seems to take longer to finish than an interesting one. A very dull job may seem to take hours to complete.

   QUESTION: _____

3. Studies show that the introduction of smoke into the respiratory system decreases its resistance to infection. People who live in areas where the air is congested with smoke have more respiratory diseases.

   QUESTION: _____

4. For a hearing aid to be effective, it should correct the person's particular pattern of hearing loss.

   QUESTION: _____

5. In order to ripen, fruit must "breathe" air containing oxygen. The process of ripening takes place at a rate that varies with the rate at which the fruit "breathes". If fruit is placed in cold storage, its breathing is slowed down and ripening is delayed.

   QUESTION: _____

6. Some natural scientists are convinced that wild animals play both because they enjoy playing and because they are healthy.

QUESTION: _____

* * *

SELF POST-TEST

After each item below, list what is inferred by the reverse or the absence of the conditions stated. The first one has been done for you.

1. If alfalfa is planted in a field that lacks proper drainage, the crop will probably fail.

If alfalfa is planted in a field with proper drainage, it may not fail.

2. If I give a professional address to an audience of people who are occupied in the same line of work as I am, I can assume that they can recognize and correct the blunders I make.

_____

_____

3. The snowshoe rabbit is aided in its struggle for survival by the color of its fur. In summer it is camouflaged when its coat takes on the color of its brown tundra home.

_____

_____

4. The value of an object may increase with age. A chair may be of modest value when it is new.

_____

_____

5. There is little truth in the proverb "opportunity only knocks once."

_____

_____

6. Before a pack is initialized, it is checked to see if any labels present in the volume table of contents have expired. If the file has not expired a message is printed.

_____

_____

7. One of the most common methods of preparing data for a computer is to have them punched on cards.

_____

_____

8. If a programmer wishes to write her/his program in the COBOL language, she/he must obtain a COBOL compiler, place it in the computer's memory, and then submit his/her COBOL program for translation.

_____

_____

9. This program produces the correct answer if we start at the statement BEGIN and follow the instructions carefully in the order they are written.

_____

_____

10. If the source pattern matches one of the patterns stored in the scanning circuits of the reader, it is accepted.

_____

_____

11. If a computer is given intelligent data, it returns intelligent results.

_____

_____

12. The first thing to be learned in fish cooking is to cook the fish as soon as possible after it is caught. The shorter the route from the fish hook to the frying pan, the better the fish will taste.

_____

_____

REFERENCES USED FOR THIS UNIT:

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Keegel, John C., The Language of Computer Programming in English, Regents Pub. Co., Inc., New York, 1976.

Sippl, Charles and Charles, Computer Dictionary and Handbook, Bobbs-Merrill, Indianapolis, 1972.

Thurstone, Thelma, Reading For Understanding, Science Research Associates Inc., U.S.A., 1969.

ANSWER KEY
INFERENCE
DATA PROCESSING

Obj. 1

2. instructor
3. family
4. children and puppies

2.
3. someone
4.

1. Joan & Wally
2. Brandy
3. house
4. Joan & Wally
5. Wally's
6. Joan & Wally
7. Bob's
8. Joan
9. Wally
10. Joan & Wally
11. Jodi
12. Joan & Wally
13. Joan

1. peripheral devices
2. peripheral devices
3. computer
4. cards
5. card reader
6. employees
7. insurance
8. cards
9. Hollerita
10. cards
11. computer
12. mistake

Obj. 2

1. B
2. B
3. A
4. B
5. A

1. A
2. B
3. A
4. A
5. A
6. A
7. B
8. A
9. B

Obj. 3

1. gray clouds
2. wet streets
3. soggy leaves
4. puddles

sewing machine
1. needle
2. cloth
3. thread

1. A
2. D
3. B
4. D
5. A
6. B
7. C
8. B
9. B
10. D

1. A
2. C
3. B
4. D
5. C
6. D
7. A
8. A
9. B
10. B

Obj. 4

1. stated
2. implied
3. neither
4. stated
5. stated
6. neither

1. stated
2. stated
3. stated
4. stated
5. implied
6. stated

7. stated
8. stated
9. implied
10. implied
11. stated
12. stated

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Obj. 5

2. how long might an interesting job seem to take?
3. how are peoples' lungs who live in clean air areas?
4. what if a hearing aid isn't correcting hearing loss?
5. what if fruit is placed in a warm area?
6. do all scientists believe this?
2. If I address people in different work than I, they may not notice my blunders.
3. In winter it must be white.
4. when it is old, a chain may be of value.
5. Opportunity knocks all the time.
6. If the file has expired a message is not printed.
7. There are other methods for preparing date for a computer.
8. If a programmer doesn't want a program run in COBAL they don't have to do all these steps.
9. The program may not produce the correct answer if you don't follow these conditions.
10. If the source pattern doesn't match it isn't accepted.
11. If the computer isn't given intelligent date, it does't return intelligent results.
12. The longer time between catch and look, the worse the fish will taste.